

PROS & CONS

A Saw Subject – Which saw to carry?

BUSHCRAFT

& SURVIVAL SKILLS

'for living life outdoors'

WHAT WENT ON

at The Bushcraft Show

STEP-BY-STEP - MAKE A KNIFE

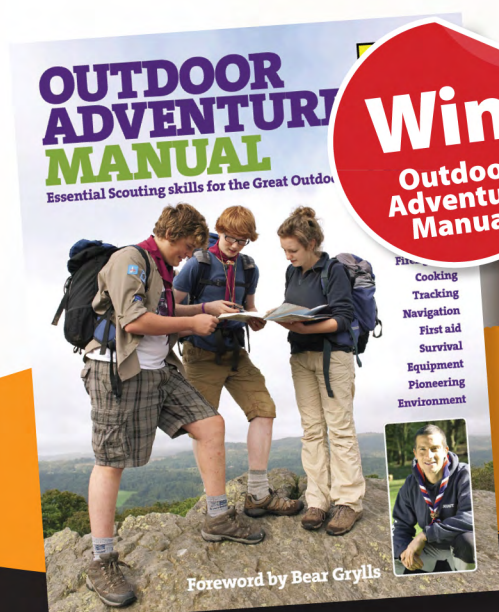
from an old circular saw blade

INTRODUCING DR. WISEMAN

Read his gruesome surgery tales

SEASONAL WILD FOOD RECIPES

From the wilds to your plate



Win!

**Outdoor
Adventure
Manual**

Find out how to:
Cooking
Tracking
Navigation
First aid
Survival
Equipment
Pioneering
Environment



Foreword by Bear Grylls

**Make Your
Own Campfire
Cooking Crane**

**Knives from
Around the
World**

**Can You Track a
Bat? - We show
you how!**

The UK's First Bushcraft Magazine

Issue 45 Jul/Aug 13



9771749

720009

07



£4.95
FSC

MILITARY MART

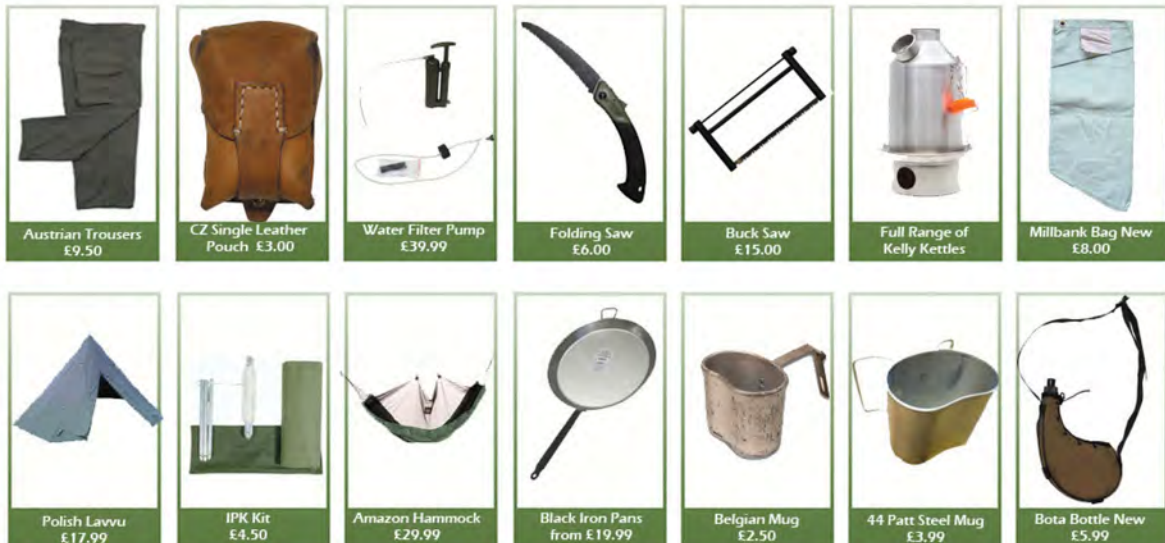
Payments powered by WorldPay

PayPal



T: 01695 228323 e: sales@militarymart.co.uk w: www.militarymart.co.uk

Military Mart - Hoods UK, Unit 2 County Road Business Park, County Road, Ormskirk Lancashire L39 3LY



Best Sellers!! Czech Bed Roll
£9.99



Nato Waterbottle
& Mug £6.50



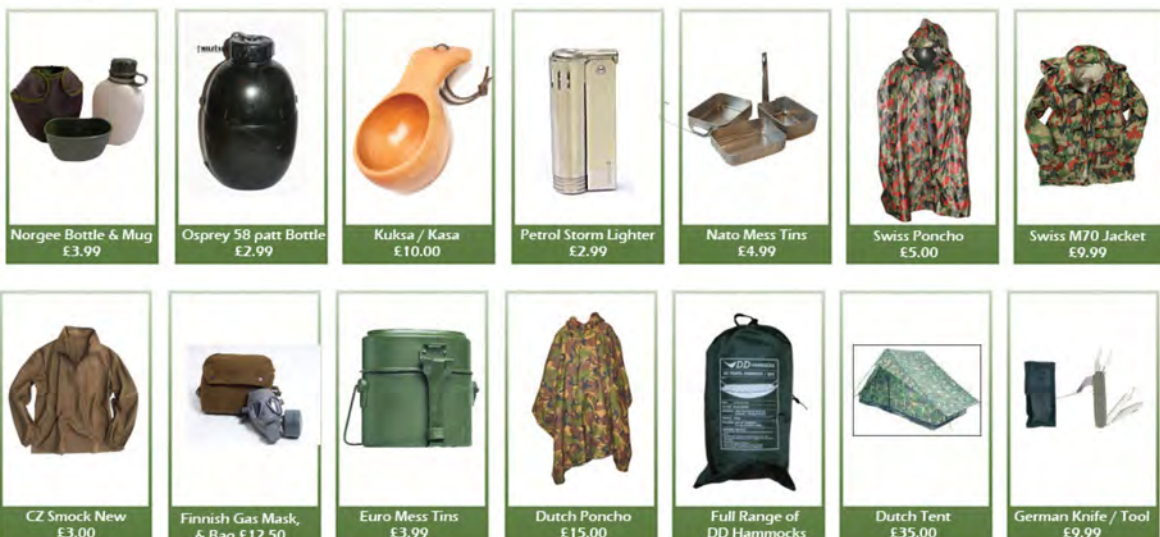
Swedish SAT Stove
Aluminium &
Stainless



Dutch Daysack
£16.00



Bison Lavvu's
In stock



www.MilitaryMart.co.uk

Editor Simon Ellar
simon@bushcraftmagazine.com

Sub-Editor Olivia Beardsmore
olivia@bushcraftmagazine.com

Design Andy Childs
design@bushcraftmagazine.com

Proof-Reading Elaine Gilboy

Advertising Sales
advertising@bushcraftmagazine.com

Office Administrator
Linda Frohock
info@bushcraftmagazine.com

Distribution
Comag
Tavistock Road
West Drayton
Middlesex
UB7 7QE
Telephone: 01895 433800

Cover Image
Axe Forging at The Bushcraft Show 2013

Environmental
Bushcraft & Survival Skills is an Environmentally Responsible Business. Printed on FSC paper from sustainable sources, we use vegetable-based inks (soya and boiled linseed oil). All waste paper is recycled via a local transfer partner. Refillable ink cartridges, eco-bulbs and recycled / recyclable consumables are used and we are involved in several tree-planting schemes, to name just some of our actions to be 'green'.

Printed by Buxton Press – an award-winning, ecofriendly printer.



Subscriptions
UK: £29 / year (1 year, 6 issues)
Europe: £55 / year
Rest of World: £72 / year
Digital: £19 / year (1 year, 6 issues)
Subscribe online at:
www.bushcraftmagazine.com
To pay by card, telephone:
0333 4567 123 & Press Option 1
Cheques & Postal Orders payable to:
SO Publications & Events Ltd
PO Box 8098, Derby, DE1 0ZQ

Tel: 0333 4567 123
E-mail: info@bushcraftmagazine.com
Website: www.bushcraftmagazine.com

Disclaimer: The opinions expressed in this publication are not to be considered those of the publisher. Whilst every effort is made to ensure the accuracy of the content, data, advice etc. contained within, no responsibility will be accepted for any errors, omissions or comments made by writers, interviewees, or editors, or for comments from any other source. We accept no responsibility for any damages incurred resulting from the use of any information contained in this magazine, however caused. Any prices quoted are correct at the time of going to press.

Copyright: All articles, writings, drawings, photographs etc. are copyright. Reproduction in whole or in part without written permission is strictly prohibited.

© 2012 SO Publications & Events Ltd. All rights reserved. ISSN: 1749-7205

COMES IN THREES!

As I write this editorial my mind is swirling with all of the great activities, memories and experiences from The Bushcraft Show 2013, what a wonderful time! Exhibitor and visitor feedback flows in daily bursting with praise and gratitude; while images and videos on social media sites remind me of those sun-filled, action-packed three days and the excitement of thoughts, discussions and plans for next year make it hard to sleep at night! We are thrilled with the way that the show grows and evolves each year and have a host of new plans for 2014, which, coupled with the new venue will make it once again even bigger and better!



I hope that you are enjoying the summer months, we seemed to have a late start, with a comment sticking in my mind from a visitor on the final day of show saying "We have had four days of good sunshine this summer and three of them have been at The Bushcraft Show!" I remember high winds, hail, snow and lots of rain, British Summertime indeed! Whilst the late start delayed some plants emerging, the rain and eventual sunshine has certainly provided us with a host of pickings and it does seem like the weather is a bit more favourable at last. Let us know what you have been up to this summer, be it in an urban setting, your local woodland or, if you have been lucky enough to get to the coast or go adventuring further afield, we love to hear your stories and experiences.

With the show over and this issue about to go to print I think it is time for a rest... no such luck! They say that things happen in threes. The moment I approve the final articles I will be grabbing a box and packing our belonging as we are moving house. This time it is a long-term move onto a lovely thousand-acre country estate. With my sons in mind, we are planning to build an axe-throwing, archery and shooting range, along with somewhere to have some chickens and possibly an aviary for a bird of prey. I am happy to say that as I type a nice wood-burning stove is being installed into the lounge completing the renovations and I am looking forward to being able to heat the house with wood from the woodland on the estate. Once moved, some impromptu camps on the estate are on the cards and I plan to attend a few courses, starting with some off-road training in July, a Father and Sons course with my oldest son and then a Jungle Expedition later in the year.

We have a host of captivating articles to educate, inspire and inform you. If Lofty left you hungry for more of his life stories, either in the last issue, or at the show, than take a look at page 18 where he continues the medical theme. Ben and Lois Orford discuss the various factors to think about when choosing a saw (p12).

Perry McGee has been on his travels again and shares his recent experiences of tracking in Florida (p26). If you have been enjoying the articles on photography and desire to capture the perfect outdoor image then read more (p38). For a little critter to act as a model, see why Pablo has gone 'batty' on (p22). If your fingers are feeling twitchy, try the latest Bushcraft on a Budget project (p30), or take a look at page 42 where Jason guides you through making a campfire cooking crane.

If you couldn't attend The Bushcraft Show 2013 this year, or want to reminisce on good times, take a look at what went on (p58) with an 'early bird' discount offer for the show in 2014. Paul Kirtley educates us in the art of navigation on page 46 and if you have ever wondered how knife designs differ around the world read page 52. That's not all, our younger readers will be interested in making natural mini boats and rafts this summer (p78) and a new career advice and situations vacant page on page 82 will inspire those would be bushcraft instructors out there...

Until next time - Happy Bushcrafting!

Simon

Simon Ellar
Editor



Follow Bushcraft & Survival Skills Magazine on Facebook



Competition guidelines: Some competitions in this magazine may be subject to eligibility criteria or age restrictions. All competitions are subject to the following rules / conditions:

i). No purchase is necessary to enter; nor is there any charge to enter any competition ii). All decisions are final iii). Bushcraft and Survival Skills reserve the right to disqualify any entrant and / or winner at our absolute discretion: iv). All prizes are non-transferrable and no cash or credit alternatives will be offered. v). Prizes may be distributed by a third-party sponsor so you agree by entering, for your details to be passed on to arrange the issue of your prize. vi). Bushcraft and Survival Skills reserve the right at its sole discretion to substitute prizes of comparable value for any of the prizes. vii). Competitions are open only to UK residents with a UK delivery address; delivery will not be made to a P.O. Box. viii). All entries must be received by the deadline shown and late or incomplete entries will be disqualified. ix). By entering a Competition, if you are a winner, you grant Bushcraft and Survival Skills permission to publish your name and county of residence along with any comments you may issue, online or in the magazine. x). If we are unable to contact you within 14 days of the closing date or if a prize is returned as undeliverable as addressed this will result in your disqualification and a new winner will be selected. xi). Winners are solely responsible for all insurance, incidental expenses associated with claiming the prize, applicable taxes and for any expenses not specified in the prize description. xii). Bushcraft and Survival Skills accept no responsibility for entries that are lost, delayed or damaged in the post or lost or delayed in transmission or for damage or loss resulting in communications not received due to computer malfunctions, viruses, etc. xiii). Competitions are not open to the employees of Bushcraft and Survival Skills, to any sponsors involved with the competition or the immediate families of employees or sponsors. xiv). Competition winner/s agree that neither Bushcraft and Survival Skills nor any sponsors shall have any liability in connection with the acceptance or use of any of the prizes awarded. xv). By entering our competition you give your permission for your details to be used by Bushcraft and Survival Skills and the competition sponsor to provide you with information on their products / services; you will always be given the opportunity to unsubscribe. Bushcraft and Survival Skills accept no responsibility for the contents or accuracy of mailings from the sponsor. Your details will not be passed on to any third parties. xvi). If you are unable to enter the competition by email to competition@bushcraftmagazine.com you can do so by sending your name, address and telephone number to the address shown above marked 'competition entry'. For all entries please state which competition you are entering and include your name, address, contact number and email address. Illegible or incomplete entries will be disqualified.

Winners will be notified by email, should you wish; please send an e-mail to info@bushcraftmagazine.com detailing the Competition for the names of the winner/s or send an S.A.E. to the address above, again detailing the competition.

The closing date for the competitions in this issue is the 15th August 2013 unless otherwise stated. Only one entry per person per competition is permitted.



nordicoutdoor

Tentipi on Finance

Why wait for the tent of your dreams. With new affordable ,
12 month, finance deals you can start experiencing the
benefits of a Tentipi tent.

Tentipi 
embrace the elements

**LIGHT
MY FIRE**

MORA
OF SWEDEN

**FJÄLL
RAVEN**

AKLIMA

**GRÄNSFORS BRUKS AB
SWEDEN**

HILLEBERG
THE TENTMAKER

Lundhags

DIDRIKSONS 1913
Grundsund SWEDEN

HAGLÖFS

KLÄTTERMUSEN

Pinewood

Tentipi
Best in Test
Bushcraft & Survival
Skills Magazine
Issue 43



Porch 7cp
now in stock

Add a
stove



Add a floor



Add a drying rail



Finance needn't cost a fortune...here's the deal

Safir 7cp	£1450.00	Typical APR 9.9%	Example - add a stove	
Comfort floor 7	£235.00		Eldfell Pro stove 7	£775.00
Total	£1685.00		Deposit	£77.50
Deposit	£168.50		12 repayments of	£61.15
12 repayments of	£132.95		Total interest paid	£36.30
Total interest paid	£78.90			

Nordic Outdoor Ltd acts as a credit intermediary and only offers credit products from
Moneyway and Secure Trust Bank PLC. Credit provided subject to age and status.

Next show
Scone Game Fair
Scone palace
Nr. Perth
5-7 July

Find us on
Facebook



www.nordicoutdoor.co.uk

23 Lake Road, Keswick, CA12 5BZ Tel: 01768 780550

20 Bruntsfield Place, Edinburgh, EH10 4HN Tel: 0131 228 9100

Tent Showroom- 225 Granton Road, Edinburgh, EH5 1HD Tel: 0131 552 3000

CONTENTS

REGULAR

- 3 Editorial
- 7 Letters to the editor
- 16 In the news
- 65 Back Issues Offer
- 66 Subscription Offer
- 67 Next issue
- 72 Trading Post
- 82 Situations Vacant

FEATURES

- 8 Instant Botany Part 2
- 12 A Saw Subject
- 18 Lofty's Life Stories
- 22 A Batty Kind of Mammal
- 26 Tracking in Florida
- 30 Bushcraft on a Budget
- 34 Wild Food Recipes
- 38 Picture Perfect Part 3
- 42 Campfire Cooking Cranes
- 46 Practical Natural Navigation
- 52 Knives from around the World
- 58 What went on at The Bushcraft Show 2013
- 62 Harness the Hand Drill
- 68 Canoe Camping
- 78 Natural Mini Boats & Rafts

REVIEWS

- 21 Book Reviews
- 36 Book Reviews
- 74 Frontier Bushcraft 3-day Taster Course

COMPETITIONS

- 7 Send in your Readers' Letters
- 21 Win Canoeing Book
- 21 Win Green Wood Working Book
- 36 Win Outdoor Adventure Manual Book
- 36 Win The Forager's Kitchen
- 55 Win a Handmade Knife

SUBSCRIBE
TODAY!
FOR DETAILS
SEE PAGE 68





**Les Stroud's
TEMAGAMI KNIFE**



4.5" Curly Birch handle
4.3" Triple laminated stainless steel blade
8.9" Overall length
Weighs 5.5oz
Supplied with leather sheath

FOR STOCKISTS CONTACT:
WHITBY & CO
T: 01539 721032
E: sales@whitbyandco.co.uk
www.whitbyandco.co.uk/helle

Hands on Bushcraft New Courses for 2013



**Contact us or
Visit our website
to BOOK TODAY!**

Call 07598 491989

www.handsonbushcraft.co.uk
adam@handsonbushcraft.co.uk




Ben & Lois Orford
www.benorford.com

Ben makes specialist handmade bushcraft knives and a wide range of woodcraft items, such as spoon knives, bowl carving hooks and other traditional green woodwork tools for the discerning outdoors enthusiast.

Lois makes custom leatherwork products, from belts and pouches to bespoke tool covers and knife sheaths, suitable for any of your bushcraft or greenwood needs.

Please feel free to ask for advice.

E: info@benorford.com
T: 01886 880 410 M: 07866 821 308
W: www.benorford.com




Where is your frontier?

Multi-Award winning bushcraft

BUSHCRAFT & SURVIVAL SKILLS	BEST IN Bushcraft Awards 2012	Winner of - BEST BUSHCRAFT SCHOOL	BUSHCRAFT & SURVIVAL SKILLS	BEST IN Bushcraft Awards 2012	Winner of - BEST BUSHCRAFT ONLINE CONTENT
BUSHCRAFT & SURVIVAL SKILLS	BEST IN Bushcraft Awards 2012	Winner of - BEST BUSHCRAFT COURSE	BUSHCRAFT & SURVIVAL SKILLS	BEST IN Bushcraft Awards 2012	Winner of - BEST BUSHCRAFT INSTRUCTOR

Design: www.atellerzero.co.uk
Photo: Paul Kirtley



FRONTIER BUSHCRAFT
Wilderness Skills & Adventure
www.frontierbushcraft.com



LETTERS TO THE EDITOR!



STAR LETTER
Survival Kit on
its way!

HAVE A GO!

Hi,

The recent article that Ben Orford did on axes reminded me of the axe and adze that I made from an old leaf spring, following the Gränsfors Bruks blacksmith class I did at last year's Bushcraft Show.

After reading Richard Lee's bow making article in the magazine, I thought you might also be interested in the equipment I have made myself. All the leather items including the quiver, arm guards, pouch and water bottle are all hand stitched from off cuts. The bows are as follows; from the top of the picture, my interpretation of a Holm guard bow backed in rawhide, then a yew 'hedge bow', followed by a witch elm self bow and then my laminated long bow. The last is a work in progress yew bow. All of these I made myself. All the arrows I made using readily available stuff off the net.

I had no previous experience with any of this but would urge people to just 'have-a-go'!

Andrew Houseago, North Norfolk

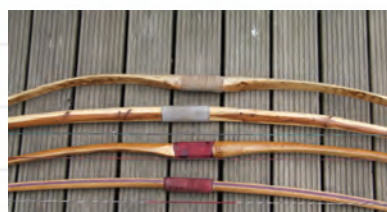
Dear Andrew,

Thank you for your letter and images, here at Bushcraft & Survival Skills magazine we echo your comment – just have a go! It matters not how the end result turns out, the learning along the way is invaluable and makes for a super second attempt.

You have crafted some great items, keep up the good work...

Happy Bushcrafting!

Simon



SMASHING SURVIVAL SHELTERS

I have been the outdoorsy type for the past 18 to 20 years in both the Scouts and the TA. Just recently I have been fortunate enough to be asked to teach some basic survival skills to the Cubs and Scouts from the Buxton District. To my surprise the Cubs and Scouts rose to the challenge, which was to build some basic survival shelters for one person. Having only basic tools; a knife, a saw, trowel and a small wooded area at Gradbach Scout Camp, the young people did an amazing job. I have attached some photos of the work they did. I would like to thank and congratulate the young people who came to the Wallaboree Camp 2013. It's events like this that show not all young people are the same.

Many Thanks

Seb Griffiths
Scout Leader 1st Buxton Scouts

Dear Seb,

It is great to see organisations such as the Cubs and Scouts reviving these skills and stirring interest in the youngsters of today. I am glad that your sessions went well and were well received, keep up the good work.

Happy Bushcrafting!

Simon



PARACORD INSPIRATION

Dear Bushcraft & Survival Skills Magazine,

I am an arborist and new to bushcraft. I am subscribed to your magazine and I have seen photos of items which people have handmade.

Here is a photo of my Paracord Pruning Saw Lanyard, which I made. I thought I would start with something simple. It did not take long to make or learn how to tie the knots. The Paracord cost around £2 from an online auction site. I then popped a small black Carabiner on the end to finish it off.

I'm really pleased with it, as it looks so much better than my old lanyard - something a bit different for a change. I'm looking into different styles and ideas now, maybe a paracord belt.

Thank you for reading,

Lee Oulton

Dear Lee,

I am glad that you are enjoying the magazine and the crafts associated with Bushcraft. That is a super lanyard, I look forward to seeing the belt ;)

Happy Bushcrafting!

Simon



To win great bushcraft prizes, send in your 'Letter to the editor' to letters@bushcraftmagazine.com

Follow Bushcraft & Survival Skills Magazine on Facebook



Write
Today!

INSTANT BOTANY PART 2

In the last issue, I introduced you to the monocotyledon or monocot branch of the angiosperms. In this part, we will be looking at the vast dicotyledon branch.

The great majority of angiosperms (flowering plants and trees) are dicotyledons or dicots. In this article, I will show you some of the major groups with which I am sure you are somewhat familiar. The monocots evolved before the dicots, but it is believed that the Ranunculaceae or Buttercup Family was among the first of the dicots to evolve.

Ranunculaceae – Buttercup Family

Identifying features: Three or more hooked pistils with dicot flowers.

Often considered an easy family to identify, the floral parts i.e. stamens, sepals, petals and pistils can have any variation of number and be indistinct from one another. Moreover, while most other families will have a set number, the Ranunculaceae can likely be identified by their lack of a pattern. They can have zero to fifteen petals and anywhere from three to fifteen sepals. Clematis is a very good wood for making bow drills, and is in the Ranunculaceae family along with the deadly Aconitum. Lesser celandine roots are edible. However, for the purposes of safety, please consider the whole family as poisonous.

Fagaceae - Beech Family

Identifying features: Trees or shrubs with a single nut attached to either scaly or spiny caps.



Clematis, from the Buttercup Family



Beech, *Fagus sylvatica*



A Birch displaying cone-like catkins



Birch, Betulaceae

AUTHOR PROFILE:

Richard Lees

Richard Lees MSc, NCFE Ethnobotanist and government accredited Bushcraft and Survival Instructor has a passion for wild living. He has uncovered secrets of our ancestors' survival and discovering what helped them to thrive. As part of his research thesis, he solved a three-hundred-year-old Ethnobotanical problem proving that Bracken rhizomes were a winter starch staple. Richard has extensive knowledge of the symbiotic relationship between plants and people. His desire is to reconnect us with nature once more.



The leaves are simple and usually lobed. The flowers are monoecious, which means that both male and female flowers appear on the same tree. (If a plant only exhibits male or female parts, then it is known as dioecious.) The male flowers will have no petals and anywhere between four and six sepals and four to forty stamens. The female flowers also have no petals, four-to-six sepals, and a pistil with a three-celled or chambered ovary. The ovary begins with six ovules; however, it aborts the extra ovules and only carries one nut per flower through to maturity.

Beech, oak and chestnut are all in this family. Its members all contain tannins, which make them astringent and diuretic. Oak bark contains quercin, which is similar to salicin. Interestingly, aspirin was originally derived from salicin.

Betulaceae - Birch Family

Identifying features: Trees or shrubs with catkins resembling cones or with nuts and attached bracts.

The Birch family has simple, toothed alternate leaves. The male and female catkins form separately on the same tree. The female catkins have a great many small flowers. Each flower has zero sepals or petals and a pistil with a single celled ovary that will mature into a winged seed or nut. The male catkins also have many small flowers with zero or four sepals; zero petals; and stamens ranging from two to twenty. Birch is a most useful tree with regard to Bushcraft, and I am sure you know all about it! Furthermore, the Birch sub-family includes alder and hazel. Alder is an excellent indicator of water, while the inner bark turns an orange colour when exposed to the air and can make a good dye. It can also be used as a powerful astringent for treating diarrhea and wounds. If you can find a large enough individual, you can also make syrup from alder sap as you can with birch.

Hazel, a member of the Birch Family



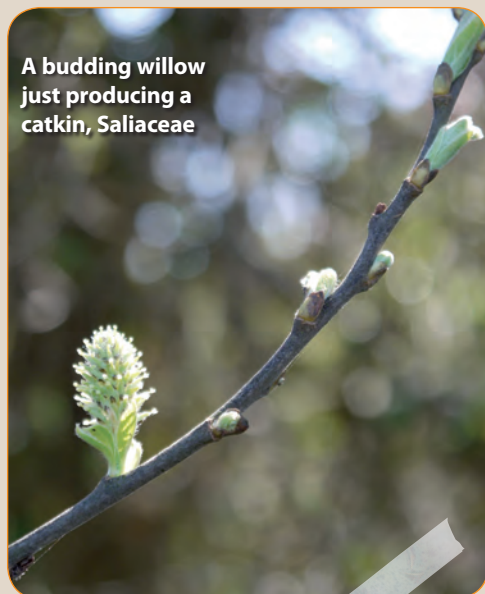
Marshmallow, Malvaceae



Willow flower emerging, salicaceae



A budding willow just producing a catkin, Salicaceae



Malvaceae - Mallow Family

Identifying features: mucilaginous (slimy) flowers and plants with numerous stamens that fuse together into a central column.

The most common member of the Malvaceae you will probably come across is the common mallow or *Malva sylvestris*; you will also of course know the marsh mallow or *Althaea officinalis*. The Mallow Family has distinctive funnel shaped flowers and features numerous stamens, which combine to form a tube that encapsulates the pistil. The flowers will feature three to five sepals and five petals, which can be surrounded by several bracts. There may be more bracts, but the pistil is usually a five-celled ovary that matures into a capsule or 'schizocarp'.

The Mallow Family is mostly edible as a salad. It can also be used to thicken up a wild food soup or broth. The mucilage can also be used for treating sunburn and other inflamed skin ailments. It is also effective internally as sore throat syrup. The leaves can be utilised by cutting them into strips to form a plaster to cover minor wounds. Other members of the Mallow Family include hollyhock and hibiscus.

Salicaceae - Willow Family

Identifying features: Bushes and trees with alternate leaves found in moist places. The catkins form many small capsules.

The Willow Family also includes aspens, cottonwoods and poplars. The flowers are unisexual as the male and female flowers occur as catkins on separate plants. There are no petals, and the sepals are either very small or completely absent. The pistillate (female) flowers have a two-to-four celled ovary that matures into a capsule. The staminate (male) flowers have two or more stamens.

Willows are known for their medicinal properties as they contain varying amounts of the phenol glycosides populin, salicin, and methyl salicylate. As previously mentioned, aspirin was first derived from these phytochemicals. When common aspirin is used as a long-term tonic, studies have shown that it can reduce a person's risk of heart disease and colon cancer.

Rosaceae - Rose Family

Identifying features: The Rose Family displays five sepals and petals with numerous stamens and styles. They also display oval, serrated leaves.

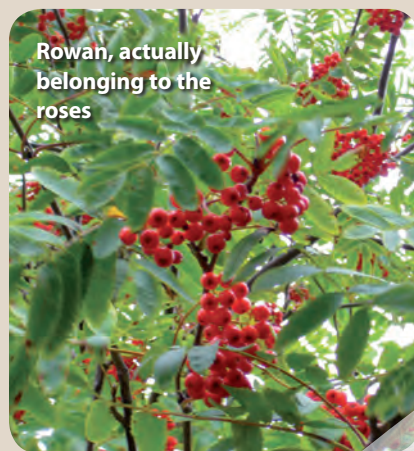
The flowers have a minimum of ten stamens, and they often display more in multiples of five. As roses have been so cultivated, there are no hard and fast rules regarding the pistils. The Rose Family is quite fascinating as it contains: apples, strawberries, cherries, rosa (dog rose, from which we get rose hips), raspberries, mountain ash or rowan (*Sorbus* spp), silverweed, wood avens, cinquefoil and plums! I have not even listed half of the species belonging to this family; there are even more! The rose is somewhat synonymous with England; for example, the 'war of the roses', and the idea of the fresh-faced, young and beautiful 'English rose'. So, when you see those rose hips in winter, think of the numerous plants that the Rose Family encompasses.

Euphorbiaceae - Spurge Family

Identifying features: The Spurge Family can vary greatly; however, you are looking for plants with coloured bracts and a milky sap or juice.

The most common member of this family that you are likely to encounter in woodland is the wood spurge or *Euphorbia amygdaloides*. Its sap is highly toxic and was once used to burn warts off the skin. I do not advise that you try to do this! The flowers are plain, and the plant is bisexual (both male and female).

Rowan, actually belonging to the roses



Wood avens, also a member of the Rose Family





A typical Euphorbia



Hedge woundwort,
Mint Family



Fennel, Apiceae

parts on the same plant). There can be between zero and five sepals and petals; however, the staminate flowers usually number five, ten, fifteen etc. Some species may have up to one thousand stamens.

Although a common garden ornamental and a woodland native, other members of the Spurge Family include the rubber or Hevea tree. It is, of course, a significant species in economic botany. Tapioca is also derived from the starch rich roots of the Manihot. Furthermore, the deadliest plant in the world is arguably a Euphorbiaceae: the castor oil plant or Ricinus communis. The deadly poison ricin is derived from castor 'beans', which are in fact seeds. Incredibly, the castor oil plant is a common ornamental in many public parks! I must state in the strongest manner that first it is illegal to try to produce ricin. Second, the process is so dangerous that you stand a greater than fifty-percent chance of killing yourself. So please admire it for its deadly beauty, but leave it at that!

Lamiaceae - Mint Family

Identifying features: square to square-ish stalks with simple, opposite leaves. The flowers of the Mint Family are bisexual and irregular; the calyx (sepal) is often two-lipped and five-toothed. There are four stamens: one pair is usually longer than the other pair, and the corolla (petals) takes a tubular form. The corolla most commonly has three lobes to the lower lip and two lobes to the upper. The ovary is comprised of two cells and will go on to produce a capsule containing four nutlets. Globally, there are over three thousand five hundred species. They range from common culinary mint to hedge woundwort and self-heal.

A very interesting member of the Lamiaceae is Salvia divinorum, also known as diviner's sage. It is a psychoactive plant, which can induce dissociative effects. Salvia divinorum is capable - especially when taken in extract form - of being

a potent producer of 'visions' and other hallucinatory experiences. Partakers have reported seeing membranes across everything in their range of vision and strange physical feelings of being twisted or contorted in some way. It grows exclusively in the shady and moist locations of the cloud forest of the isolated Sierra Mazateca of Oaxaca, Mexico. However, non-locals or 'outsiders' are definitely

not welcomed in this area. The minimum you can expect is to be ignored, but there are numerous records of severe violence. Perhaps just go to Cancun like everyone else!

Asteraceae - Aster Family

Identifying features: They appear as one flower, but they are in fact comprised of up to hundreds of tiny individual flowers. As a general rule, they are flat and round in shape e.g. daisies or sunflowers.



Asteraceae centre, note
the many separate
flowers



The sepals in this case are actually bracts that are modified leaves, appearing in multiple layers. The 'petals' create the illusion that there is one large flower. If you take a hand lens and look closely, you will see that the petal itself is actually a mini flower complete with its own sepals, petals, stamens and pistil. Every one of these microscopic flowers will produce its own seed. Sunflowers are the best example of the attributes of this family as you can clearly see each individual seed.

The asters are the joint largest family of angiosperms along with the orchid, which has nearly twenty thousand species. There are over nineteen thousand species of aster. It is one of the last families of flowering plants to evolve and is chemically complex. Ethnobotanists tend to get excited over a group of chemicals called alkaloids. Alkaloids seem to have the greatest effect on the human body and are present in many modern medicines. In fact, a quarter of all modern pharmaceutical drugs are directly derived from plants, the vast majority of which are derived from the Asteraceae Family.

Apiaceae - Parsley Family

Identifying features: Compound umbels or umbrella looking flowers, which take the form of clusters radiating from a single point at the end of the stalk.

The Apiaceae are the last family of flowers to learn. You really need to know what you are doing and identify one species from another with one hundred percent accuracy. Some members of the family are deadly poisonous, and some members of the family such as alexanders, angelica, caraway, carrot, sweet cicely and parsnip are all very edible. The deadliest plants are almost identical in appearance to the most edible. The 'big two' are hemlock, Conium maculatum and hemlock water dropwort or Oenanthe crocata. Famously, Socrates was sentenced to death and chose to drink hemlock as his method of execution. Hemlock poisoning will cause paralysis, which starts at the feet and slowly creeps up the body. The hemlock will eventually paralyse the heart and lungs, ensuring a slow and lingering death.

The twenty-one families that I have described to you in parts one and two only really scratch the surface of plant identification. Yet I hope that it has given you a solid grounding. If I may offer any advice, it would be for you to purchase a good quality hand lens and a good quality field guide before you try eating or experimenting with any of the species in the families that I have covered. Be careful. But most of all enjoy the beauty of the plethora of species that surround us. As a wise man once said, knowledge is power.



Woodlife Trails was established to provide unique courses introducing and immersing participants into the countryside, woodlands & forests of the UK using a mixture of old-school naturalist methods, bushcraft skills, ancient tracking and modern observation and field-craft techniques.

in association
with the



In association with the National Trust, our aim is to guide you on a journey of self-discovery heightening your awareness and enabling you to appreciate and get closer to its inhabitants. You will be able to develop many skills and increase your knowledge on the way."

Visit our website at www.woodlife.co.uk for details of courses, programmes and services or contact us by email info@woodlife.co.uk



FORGE AHEAD.

PARACORD SURVIVAL BRACELET



SURVIVAL

PARACORD FIXED BLADE



ULTIMATE PRO FB KNIFE



HATCHET



GERBERGEAR.CO.UK

UNSTOPPABLE GERBER

A SAW SUBJECT

AUTHOR PROFILE:

Ben & Lois Orford

Ben and Lois Orford live and work from their home in Herefordshire. With their backgrounds in green woodwork and traditional woodland crafts they make a range of handmade woodcraft tools, bushcraft knives and leatherwork for the discerning outdoors enthusiast. Their combined experience and passion for their craft makes them keen to pass on their knowledge and skills.



A classic buck saw

When it comes to woodcraft and bushcraft skills there are many projects where you simply cannot manage without some basic tools. We covered axes in the last issue and now we need to think about what saw to carry.

There are many shapes and sizes, from the most traditional design to the more modern lightweight saws, but what are the attributes of each one?

There are various factors to think about when choosing a saw, such as convenience of carry, size of blade (which directly affects the size of timber that can be cut), and style of the teeth (the shape and spacing of the teeth will affect how fast it cuts and how smooth the finish on the timber will be).

Some of the most common saws that are carried by the avid Bushcrafter are the classic folding saw and various manufacturers make these. Two of the leading makes are Bahco (which used to be called Sandvik) from Sweden and Silky from Japan. Both have a strong tradition in quality tool making so if you go for one of these makes you can't go far wrong.



Bahco Laplander

The great advantage of the folding saw style is that they are conveniently carried and the handle of the saw covers the blade when not in use, making them a great safe saw when in your pack.



The disadvantage is that they are often quite short in blade length, which does limit the size of material you can cut, so think about the main jobs the saw will tackle. You can pick up much cheaper versions from car boot sales and garden centres but these may not be quite as robust as a quality make which can be more expensive but could well last a lot longer.

Bahco have a range of shapes and sizes but the most popular one is the Laplander Saw which comes with a nice green handle (this can make it easy to lose in the woods so watch out), with a comfortable grip. It has a good quality blade that has a black Teflon coating which has the advantage of reducing friction when cutting and preventing the blade from going rusty.

The blade itself is not hollow ground along the back edge but the teeth have a set to allow the blade clearance when cutting into the log. It has a more universal tooth pattern that allows both cross cutting and ripping down the grain, which makes it very useful when out at camp making gadgets and woodcraft items. We have had one of these saws for around 15 years (we have replaced the blade a few times) and have found that even though it might not cut as aggressively as some of its rivals, it does keep going and has the advantage that the blade is almost impossible to break. It can be bent but won't shatter and can even be bent back to shape, which is a definite advantage.

The other great advantage of the Laplander Saw is that not only does the blade lock open but it also locks shut to prevent it from opening either in your pocket or your rucksack.

The folding saws by Silky have a vast range of shapes and sizes, from blade lengths of 13cms (Pocket Boy 130) to 36cms (Big Boy). This range gives you the choice of a quality saw to either fit in your pocket on a walk to cut the odd walking stick or a saw big enough to fell small trees. They also make a great range of tooth sizes from a coarse cut to a very fine tooth pattern which is great if you want a saw for more intricate woodcraft. These can be easily changed so you can carry some different blades with you and change them as necessary.

The advantages of Silky style saws over the Laplander is they cut more efficiently and have an incredibly sharp blade that just eats through the timber, with a rubberised handle for a secure grip. This is why they are so popular in the Arborist community. The blades do need more care when in use, however. The blade is hollow ground on the back edge as the teeth don't have a set to them. This allows the blade to be thinner and cut more quickly but you have to make sure you concentrate purely on the pull stroke or you can bend and easily snap the blades if you get them stuck in a cut. This is a disadvantage if you are out and don't have a spare blade with you. The other factor is that due to the aggressive

tooth shape for efficient cross cutting these saws do not like to rip wood down its length unless you have a specific rip cutting blade.

The Silky saws don't tend to have a lock for keeping the blade closed but the blade can be tightened

to prevent it from opening easily in your pocket or rucksack. They do however have two different locked open positions which are very useful for woodcraft.

Silky and a few other manufacturers do make a range of fixed saw styles which have the same attributes as the folding saws with the advantage of a more safe locked position. They often have a more ergonomic handle shape and a longer blade length for more efficient cutting. These come with some good sheaths to protect the blade and also allow you to wear it on your belt for easy carry and draw for use. Often these are a little more bulky when you have to stow them in your rucksack but they

can be fastened on the outside using compression straps.

The classic bow saw comes in a range of different sizes and styles of



Silky pocket boy



A classic bow saw





Panel saw

blade, from hard point to Raker blades for green wood. It is a good saw for cutting larger diameter timber or lots of firewood and it still has some advantages in a fixed camp. A larger bow saw can be very useful as two people can use it, one on each end of the bow, sharing the workload. The main problem with them is that they are quite an awkward shape making them difficult to transport and often have a flimsy blade cover that is easily cracked and broken.

The safest way to transport a large bow saw is to remove the blade and either wrap it in something or coil it in your cooking pot and reattach it once you have fixed camp. The body or frame of the saw can safely be carried on the outside of your rucksack or stowed on your vehicle with no fear of catching yourself on the blade.

We have often found that unless you buy a quality blade and a quality bow saw you will soon come up against a frustrating drifting and curving cut as you use it and this binds the blade and makes it very hard work. Also the bow saw is only designed for cross cutting and not ripping down the length of timber. It often requires a fixed saw horse or sawing bench to work well, but a friend once showed us how to hold the bow saw when you haven't got either of these devices to hand. Holding the saw between your knees and feet and holding the

timber with both hands, move the wood over the saw blade. It works well but do be careful of your fingers.

If you want to travel even lighter when carrying a bow saw you can improvise the bow and just carry the blade with you with a couple of split rings or bolts through the fixing holes at the end of the blade. For the bow you can either use a freshly cut hazel

rod, which you can bend over your knee, or make a more elaborate frame to hold the blade. This does take some time though and you really need to have a smaller folding saw in order to help you make it, but this is a good skill to practice and allows a bigger



Two 'old traditional' choices

saw for fixed camps. There are some great plans on how to make these in the book *Bushcraft* by Mors Kochanski - it also has a great section on 'Sawcraft'.

The classic buck saw is an ingenious version of the bow saw, that you can either make yourself or can often find at old tool stalls at boot sales. These allow the frame that holds the bow saw blade tight to collapse down and flat pack in your rucksack. Quite often

the saw body actually encases the blade making it very safe and convenient. These can often drift in the cut like the bow saw if you haven't tensioned the blade enough or don't have a good quality blade. The only problem with this type of saw is that even though you do get a relatively long stroke to the blade, the frame itself will limit the maximum diameter of the log you can cut, as when you cut deeper the tension bar hits the log and prevents the blade cutting deeper. This can be overcome by rotating the log to allow the cut to continue, but often this is not possible.

The other great saw to carry, which is often overlooked by the bushcrafter is the conventional panel saw. To be honest, you may find your friends laughing when they first see it, but you wait until they see it perform then they will be rushing to their local DIY store! Again a quality saw is the way to go and we highly recommend the Bahco Superior panel saws with the Teflon covered blade to avoid it getting rusty as soon as you take it to the woods. They have a good blade length that is not easily broken or bent and this can cut very large diameters of log or branch, with the advantage of the wider blade to prevent the annoying drift that the bow saw often produces.

The comfortable locked position of the handle gives you a good all round saw which can cross cut and rip easily so it's great for making various items around camp. These often come with a simple clip-on blade cover to protect the teeth and yourself and can easily be attached to the side of your rucksack.

We personally think that this saw is often overlooked and for around £25 it is a great, if unconventional, all-round saw for a fixed camp.

When it comes to safety with a saw, make sure that the log or branch is either secure or in a fixed position, be aware of the tensions in the timber so it won't spring up at you or pinch your saw blade. Also remember that you want to either keep your opposing hand well out of the way or cross your hand over so that you are holding the branch on the other side of the sawing hand. This prevents the saw from skipping out of the cut and across your hand or fingers. Saw cuts are some of the worst, as they do not leave a clean cut but a ragged open wound where the saw has removed a kerf of skin. Gloves can be a good idea when sawing small diameter timber where the tendency for the saw to spring out of the cut is increased.

To sum up - if you are choosing a saw then it is a real advantage if it both cross cuts and rips, that it has a blade that can withstand a bit of abuse and not get snapped easily and also that replacement blades are readily available. Choose a style and size of saw that suits the tasks it will be most used for. Think about weight and how easily it can be carried. Apart from the panel saw we really do like the Silky saws as they cut so well, but some words of advice if you have a friend who asks to borrow one (which they will). Show them how to use it properly and safely as they may not know how scary sharp it is and that a pull saw needs a certain technique or they may well break your blade and that is not a good for any camping trip or lasting friendship!

For extra information please see the accompanying video at <http://www.youtube.com/benorford>



IN THE NEWS



NEWS JUST IN... We are delighted to announce that Cody Lundin, co-host of the television series *Dual Survival* and author of *98.6 Degrees* and *When All Hell Breaks Loose* is coming to *The Bushcraft Show 2014*.

He is the founder and lead instructor of the Aboriginal Living Skills School in Arizona and he lives off the grid in a self-designed eco home in the high-desert wilderness of Northern Arizona. See him barefooted at The Bushcraft Show 2014!

For more information and to book your 'early bird' tickets visit www.thebushcraftshow.co.uk or see P62



Make sure you book the dates – 24-26 May 2014.

KNIVES UK SHOW

Coming soon, on the 30th June 2013, Knives UK is the premiere knife show in the UK. It has some of the top knife makers from around the country and abroad, all under one roof, showing their talents to the public. It also has traders selling everything from steel, handle materials, sheath making supplies and knife kits, to grinders and gas forges.

An annual event, Knives UK is now in its 8th year and this year a special effort has been made to organise some great demonstrations of grinding skills, knife making techniques, sharpening, safe knife use and whittling. You needn't be just into bushcraft knives either, there is a wide range of makers whose own styles and skills will be on show to tempt you with either the perfect knife or the inspiration to make your own perfect knife.

Knives UK is held at Tortworth Court Hotel in the Cotswolds, which is a lovely place to visit for all the family. For those who aren't so keen on the knives the beautiful hotel has its own arboretum and gardens to wander in. The friendly intimate nature of the show makes it a great place to meet people with similar interests, pick up information, make useful contacts, top up on supplies and share enthusiasm.

Unlike the US where the knife making and knife show culture is so strong, we need to support our own show and industry, so come along and give your support. The show is easily accessible from junction 14 of the M5 and a short distance from Westonbirt Arboretum and the pretty market towns of Cirencester and Tetbury.

Tickets are only £10. For more information, booking and contact details see the website at www.knives-uk.info



COLLAPSIBLE COOLER!

As bushcrafters we aim to travel light however, at times this is not completely practical in all circumstances. For example, you may have medication that must be kept cool, or you may be taking food that needs to be kept fresh for as long as possible. If you take a cool box with you, these are usually bulky items which once empty still retain the same space, leaving you with the problem of carrying them around.

We would like to introduce to you a novel idea of a collapsible cooler from the iconic US outdoor brand, Kelty.

These folding coolers are being introduced into the UK outdoor market giving us the best of both worlds. It is not only a semi-rigid cool box that can keep food fresh and drinks cold, but it also conveniently collapses for easy storage when not in use. The lid includes four cup-holders, and the bottom is reinforced with interior foam, which holds the box or tray flat to prevent any spillages. These PVC-free coolers also have reinforced feet for enhanced abrasion-resistance. Made with 330D Polyester Ripstop, 600D Polyester.

They are available in three different sizes, small, medium and large, priced from £44.99 to £79.99. All three sizes are available to buy via Amazon UK.

For further information about Kelty and to view the full product range, please visit www.kelty.com



COMPETITION WINNERS...

Swag Bag – Karl Dale, Leeds
Into The Wild Book – Nathan Winters, Sussex
Les Stroud Wetterlings Axe – Dierdre Cartwright, Manchester
Wild Weather Book – Jasmin Hann, Somerset

CAN YOU SURVIVE CASTAWAY FIVE DAY CHALLENGE?

Last year some of our readers participated in the Castaway Five Day Challenge for Dorset-based Diverse Abilities Plus and, following on from their fundraising success, the charity is again giving you the chance to take part in this year's event from Saturday 21st – Wednesday 25th September, which is sponsored by Seeker News.

The charity, Diverse Abilities Plus supports local children and adults with physical and learning disabilities and is looking for 24 men and women to take on the challenge, which takes place at a mystery woodland in a beautiful beach location in the South West of England.



The event is suitable for anyone aged 18 years and over, no level of physical fitness is required – just a sense of fun and adventure! Whether you enter as an individual, or with a friend, family or colleagues you will have a fantastic time! Participant Sue Robathan, took part in last year's Challenge and said: "One of the main benefits of the five days was the community spirit that was experienced by all participants. Building our shelter, keeping warm and sharing nourishment became the common denominator to link very different people together to forge strong bonds. I would definitely recommend the Castaway Challenge to anyone."

The Seeker Castaway Five Day Challenge kicks off with participants jetting off on powerboats, kindly sponsored and provided by Powerboat Training UK. During the event those that take part will experience fundamental elements of survival, testing participants from dawn until dusk! During the five days there will be a variety of fun activities, secret challenges and tasks to learn and complete, including survival techniques, building a natural shelter, fire lighting techniques, sea life-raft survival skills training, navigating by the stars, sea fishing and much more!

Sharon Wells, Events Fundraiser at Diverse Abilities Plus, said: "The Seeker Castaway Five Day Challenge is a once in a lifetime opportunity and by taking part you will help us to make a difference to the lives of children and adults with learning difficulties and profound physical disabilities. If you fancy a challenge or just want to get away from the daily routines and stresses of life, this is for you! You will learn unique survival skills, make new friends and overall have a fantastic, fun experience."

If you think you can survive the Seeker Castaway Five Day Challenge, entry is £50 per person and each participant is kindly asked by the charity to raise a minimum of £550 in sponsorship. Diverse Abilities Plus will support participants fully with fundraising ideas to help reach their target easily.

For more information or to book/reserve your place now for this fantastic experience please contact Sharon Wells via telephone on 01202 718266 or email Sharon.wells@diverseabilitiesplus.org.uk or visit www.diverseabilitiesplus.org.uk/events

LOOKING FOR A JOB IN THE GREAT OUTDOORS?



In our current economy, jobs are scarce and the career of our dreams can feel out of reach. Well, here at Bushcraft & Survival Skills magazine, we often hear from readers who want to work in the bushcraft industry, or desire to set up their own company. Currently in the UK there is not a specific route to take to become a bushcraft instructor, despite there being many people wanting to get involved in this industry and a younger generation of bushcrafters following suit. We are keen to encourage people to go after the job of their dreams, so we have selected a team of experts to offer you their career advice from real personal experiences. In each issue of Bushcraft & Survival Skills magazine we will share this advice with you. In addition, we have dedicated a page of the magazine to promoting companies in the industry that are recruiting, offering either full-time, part-time, freelance positions or apprenticeships and voluntary experience. This is a FREE facility so if you are a company and would like to advertise your job vacancy to a target audience, please get in touch.



See p82 for Situations Vacant and follow our Facebook page for immediate updates
Bushcraft & Survival Skills Magazine

WRITE IN

We would like to hear from you regarding your experiences of working in the bushcraft industry and/or challenges you may have faced. What would make things easier for you? Plus get in touch with any questions you would like to put to the panel.

To advertise your position email your advert details to info@bushcraftmagazine.com

INTRODUCING DR. WISEMAN

Every time I sit down to write an article, memories come flooding back and I sit there for hours daydreaming. I still laugh now at some of the events that happened. One that stands out was the medical clinic we ran in the Kelabit Highlands in Borneo. People travelled miles for treatment, some with urgent complaints, while others were just curious. The women had their ear lobes stretched from an early age by piercing them and inserting brass hoops. More were added till the ears hung down 9 to 12 inches or more. As western civilisation influenced their lives the women started making a month long round trip to the coast to have these ear lobes removed. They went to Chinese dressers who left a lot to be desired. Many of the women returned with ear infections which I treated, and it wasn't long before they asked me to do the surgery.

Fancying myself as a Harley Street specialist I started doing this in the clinic. The secret was to do one cut per lobe each session, suturing the ear first then the lobe and to wait five days before completing the process. Then five days later the same with the other ear. The ears bleed a lot so care must be taken to minimise this. The anaesthetic we used contained a high percentage of adrenalin which helped with this. One of the lads used to assist me, not by mopping my brow but by making the tea. I was out on patrol when a young girl arrived at the clinic wanting her ears cut, and this lad who used to help me, attempted the task. Without even sitting her down he tried to cut the lobe with a pair of scissors. She fainted and so did he when a gush of blood erupted from the cut.

AUTHOR PROFILE:

John 'LOFTY' Wiseman

Lofty Wiseman served with 22 SAS for over 26 years, rising to the rank of Sergeant-Major and ran the SAS selection course and the Survival School, ensuring that the standards for the SAS remained high. After he retired, he wrote *The SAS Survival Handbook*, first published in 1986, selling over 2 million copies, it has been translated into 18 different languages and adapted for the Collins Pocket Guide and iPhone App selling hundreds of thousands each year.



Skin complaints were common and it was difficult treating these. Some were fungal, others were infected scratches. Heat rashes, stings, allergies and reactions to certain plants all played their parts. To see what was most effective we treated patients with a different cream on each limb. I remember one patient with one leg painted dark purple with gentian violet, the other leg yellow with iodine. One arm was covered in mercurochrome which was bright red and the other arm was painted pink with calamine lotion. The victim looked like a harlequin and was told to come back in the morning to see what worked best. Far from upsetting them they loved it and would want the same treatment even when they were cured.



Camp hygiene was non-existent and there were many cases of diarrhoea and sickness. The locals slept in longhouses built on stilts and all rubbish and body waste was allowed to drop through the holes in the floor, where the pigs below would eat it. They collected water from the river which acted as a sewer. Once we established a water point where no one was allowed to wash upstream of, village health improved dramatically. They still allowed the pigs to Hoover up all the waste, but we encouraged them to cook the meat thoroughly before eating. They killed a pig occasionally and would roast it over an open fire. This did not cook the meat properly and worms and liver flukes resulted.

My biggest tip to anyone who enjoys the outdoors is to protect your water source. If the water is taken from a river, establish a collection point and don't allow anyone to swim or wash above this point. Filter the water before boiling. An improvised filter can be made from a sock filled with sand charcoal and moss. Any flotsam is trapped in the moss and the charcoal has excellent filtering properties. It will take the muddy taste away and help sweeten the water. The sand will filter out the smaller particles but any bacteria that may be present are microscopic, and even though the filtered water looks clear it must be treated. Chemicals like chlorine can be added, but boiling is favoured. The only water that we don't treat is collected rainwater; all other water we treat regardless of the source. If you have a fire, always have a container filled with water over the fire.

All the different tribes we came across were very clean, bathing at least twice a day. At the same time they would wash whatever they were wearing. Different plant extracts mixed with fat were used as soap, but the routine was to bash the clothes over a rock. This method was no good for delicates and buttons disintegrated in the process. We declined their kind offer of a laundry service.

We never went barefoot in the longhouse because of the risk of worms which burrow under the skin, entering the body through the feet. These parasites can live anywhere in the body but prefer the intestinal wall. Eating undercooked meat, especially pork and drinking infected water are the main causes of worms. We were very similar to animals and were wormed regularly. The worst thing to have in a survival situation is worms - these take most of the nourishment leaving the host starving.

I tell people that you cannot keep pets in a survival situation so the worms must go. Prisoners of war drank petrol to de-worm themselves but this is not without risk. If you intend to travel to third world countries take advice on this subject. Practicing good personal and camp hygiene will keep you safe.

Many patients at the clinic had dental problems. Because of their diet their gums were soft and the main cause of infection. I pulled many teeth and impressed my mate who helped me, the one who cut the girl's ear lobe. He was getting on a bit and had

thirteen teeth left which he wanted extracted so he could get false teeth made by a Chinese dentist before we returned to the UK. I happily obliged but soon found out that his teeth were a lot more stubborn than the locals. All was well to the last tooth, lucky number thirteen. After several injections of anaesthetic he still complained of pain. I told him he had to be brave



and put up with a little bit of discomfort. The worse thing to do when extracting a tooth is to pull it. It should be worked from side to side loosening it and gently easing it out. After twenty minutes of arguing I finally got him in a head lock and pulled the tooth, swinging him around the room in the process. There was a loud crack and the reluctant tooth broke free. Unfortunately it came away with one and half inches of cartilage from his jaw which was dislocated. I tried to hide the evidence from him but he was still complaining, even with the dislocated jaw. After what he did to the girl's ear I didn't feel too bad, I thought justice had been done. I still laugh at the vision of me swinging him around the room like a rag doll. His bad luck didn't end

there. After the tour we had a few days off before coming home, so he got his false teeth fitted. The bottom set was good, but the top set too loose. He took them back to the Chinese dentist to have them modified, who promised him faithfully that they would be ready first thing in the morning. Unfortunately when he went in the morning, every trace and sign of the dentist was gone, he had upped sticks and vanished. You can imagine the flack he got from us.

A lot of people imagine the SAS in jungle operations as bronzed warriors rippling with muscles but nothing could be further from the truth. Coming out of the jungle after a four month period we were pasty skinned, skeletal, and covered in sores, rashes, and cuts. Everything in the jungle is sharp and everything bites. There was a place in Penang that we used as a Rest and Recuperation centre, situated on the coast. It was used by the married families from the nearby airfield. A troop of us arrived on the beach looking forward to a tan and a dip in salt water which works wonders with skin complaints. As we charged towards the water, all the people on the beach quickly gathered up their children and fled, they thought a leper colony had been released. Four months was about the maximum time to spend in the jungle. After this time all reserves of energy were gone and dizzy spells were frequent.

Carrying a heavy pack with minimum rations took its toll and everyone suffered with one thing or another. Hours were spent digging thorns out of each other. Everyone was covered in leech bites and a lot of these turned septic.

So we were not a pretty site and were always glad to get back in the jungle where we felt most at home. No one stared at us there, we were normal.



WWW.MILITARY1ST.CO.UK

5% DISCOUNT FOR ALL READERS!
DURING THE CHECKOUT PLEASE
APPLY DISCOUNT CODE
MIL1STBUCR



KNIFE SALES TO OVER 18S ONLY



GREENWOOD CRAFTS

Price: £25.00

Authors: The Crowood Press Ltd

Publisher: Pan

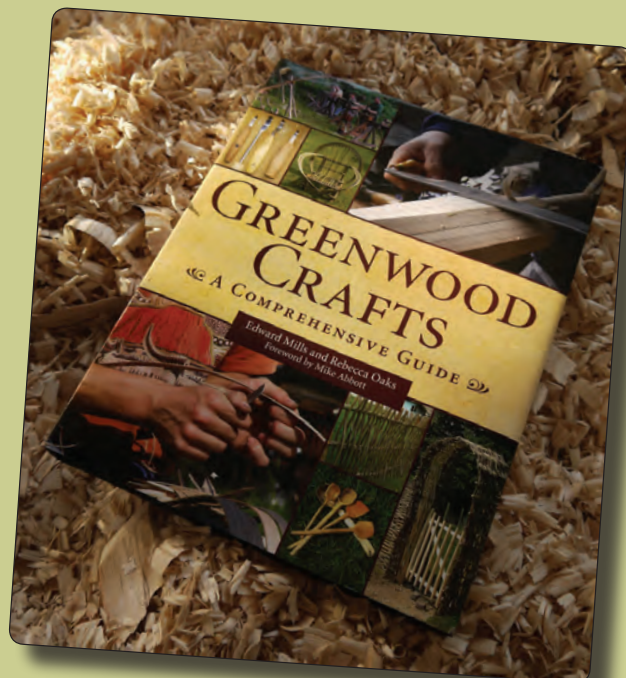
ISBN: 978-1847974204

This guide provides an overview of many different types of greenwood crafts and is quite unique in how comprehensively it does this. It is definitely useful for the beginner as it provides an introduction into the world of greenwood work, moving on to projects such as chairs, baskets and other handmade products.

When starting out in an unknown field of interest, books such as this can help you grasp the basic ideals and provide the initial knowledge to begin in a more specific area. So with this said, other books will delve more deeply into a certain area of craft and further reading would be needed to supplement what can be gathered from this book.

However as previously explained, it is not the intention of this book to go into major detail but to encourage the novice or interested spectator into finding out about the abundance of crafts in Britain. In this area it does well and the pictures supplement the text more than adequately.

This book will be of great use when discovering the world of greenwood crafts as it exists today.



CANOEING BY RAY GOODWIN

Price: £16.99

Author: Ray Goodwin

Publisher: Pesda Press

ISBN: 978-1906095260

Ray Goodwin is a renowned canoeing expert, who has worked with the likes of Ray Mears and runs his own courses passing on his knowledge to others.

He has written this comprehensive book that focuses on the art of canoeing as well as including information on the background, safety and reality of canoeing in the wilderness.

In terms of the book's layout, it is well divided into a number of appropriate categories, some that are relevant for beginners with others for the more experienced. The book is also filled with well-photographed pictures, many in a step by step format, that enhance the text on both a practical and aesthetic level. The knowledge is clearly there due to his extensive experience, and the writing puts this across clearly so the reader can begin to pick up basic canoeing skills quickly.

Many different areas of canoeing are covered, with information on the style, shapes and uses of canoes as well as how to canoe in whatever circumstances you may find yourself in.

Overall this book provides the theory behind canoeing, combining this with evocative pictures to inspire those who want go out and do it themselves.



WIN A COPY OF THESE BOOKS.

Send in your details to win a copy of one of these books, detailing which you would like to win.
(see T&Cs p3)

WIN!

A BATTY KIND OF MAMMAL

AUTHOR PROFILE:

Pablo

Pablo is a life-long wildlife enthusiast. He has a military and law-enforcement background and has a wide range of teaching and training qualifications. He uses a combination of bushcraft, tracking and field craft skills to get close to wildlife. He has tracked wildlife in various locations around the world including Southern Africa. Pablo runs Woodlife Trails; a Bushcraft and Tracking school and Woodlife Social Network, a site dedicated to wildlife, tracking and bushcraft.



To me bats are the true stars of the night sky! Akin to shooting stars they appear darting into our world for a fleeting glimpse, only to disappear just as quickly as they arrived. To fully appreciate these nocturnal hunters all you need is some understanding of their ecology, a lot of patience and a little technical wizardry.

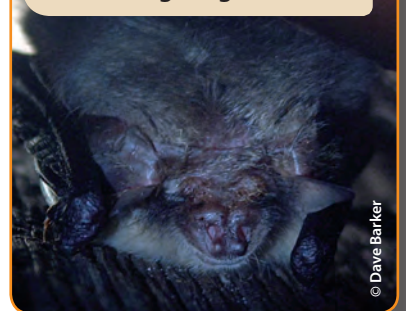
To help me delve into the world of bats I have enlisted the assistance of Dave Barker for this article. Dave is a Conservation Ecologist, whose company Wild-Science provides ecological and land management advice and he is one

of the many Bat Wardens who are dedicated to further the understanding and conservation of our British bats.

Bats have historically captured our imagination for centuries, mostly due to their secretive and nocturnal existence. Like many animals, bats come with tradition, folklore and prejudices. Novels such as Bram Stoker's *Dracula* and the many horror films and TV shows associated with vampire bats have fuelled a modern day perception of bats as animals not to be trusted and even ones to fear. This of course is utter nonsense and, as with most things, it's a lack of understanding that feeds our fears.

The first recorded instance of any true understanding of bat biology and their ability to navigate the night sky came in 1793 when Lazzaro Spallanzani, an Italian priest, demonstrated that bats were able to avoid obstacles without the aid of vision – the first indication that an animal used sound and hearing (echolocation) to hunt. As with most science of the day his experiments did not factor in the health and wellbeing of the bats being studied, I'll leave the gory details to your imagination... A myth has arisen that bats are blind, which is not the case. Bats

Hibernating Long-eared bat



© Dave Barker

A roost of Natterer's bats Photo



© Dave Barker



can see very well and will readily use their eyes to fly, hunt, and socially interact.

Bats like us are mammals; they are warm-blooded and produce milk for their offspring. Being a mammal, bats also share a very similar skeletal structure to humans; the Latin name for bats, Chiroptera means 'hand wing' or 'winged hands'. Bats are the only true mammals capable of powered flight (having the capability to flap and warp their wings) and a name that sums them up best for me comes from the German for a bat which is fledermaus – a flying mouse. In fact an old English name for bats is flittermice, which kind of speaks for itself. There are many mammals that use various means to glide or fall gracefully from a height, for example a flying squirrel, but despite its name the flying squirrel doesn't actually fly but uses extra skin to glide from one area to another.

World wide there are around 1,100 bat species, but here in the UK we have only 17 of this number confirmed as breeding, supplemented by the occasional vagrant and visitor blown over the channel. The most abundant species in the UK is the Common pipistrelle or the 'Pip' as ecologists call it. Pips weight in at around 5 grams (less than a £1 coin) and are capable of eating up to 3,000 small insects in one night. The latest population estimate of Pips in the UK is around 2.5 million. Two of the rarest bats in the UK are true woodland specialists; these being the Barbastelle and Bechstein's bat. The most recent UK population estimate for the Bechstein's bat is only 1500 individuals.



Greater horseshoe bat in torpor

As with all animals, bats have evolved to take advantage of a niche within nature. Bats like the Noctule bat, emerge early in the evening, hunt high (sometimes you can see them hunting with Swift, Swallow and House Martin) and flying fast on their sleek wings, swooping down to catch their prey. Others like the Long-eared bats, are silent stalkers within the woodland canopy; using their short stubby wings to hover and negotiate around twig and branch, whilst all the time passively listening out

with their large ears to pounce upon insects walking over leaves.

The bat wing is a true marvel of nature's design. The wing itself is made up of a double layer of skin membrane held between the forearm and five elongated digits (what would be our hands) of the wing, and their ankle and tail. The much thinner bat wing allows bats to manoeuvre more quickly and accurately than birds. The membrane is very delicate and can be easily ripped but also has the ability to regrow due to a high concentration of blood vessels. We will talk about the bat's ability to echolocate later, but bats also have very sensitive areas on their wings which allow them to detect air-flow. This feeds information to the brain so that the bat can change its wing-shape to the conditions.

Bats prefer to hunt at twilight or at night, which provides the wildlife enthusiast or "bat tracker" with a bit of a problem. A small, black, fast flying object at night can defy all attempts at identification! But, as with a lot of aspects in tracking, all you have

to do is know a bit about the quarry and the environment, together with a few tips and tricks and you are nearly there!

Bats live in roosts (they don't make nests) and tend to move around according to the time of year. In the winter bats hibernate, so they must find a protected site that is cool, relatively humid and has a stable microclimate. For this, most UK bats hibernate in caves, abandoned mines, tunnels and cellars, while some species utilise crevices and holes in trees. In summer, females congregate together to form maternity roosts which may be nearer optimum foraging habitats such as pasture, woodlands or water. Maternity roosts are nowadays mostly found in man-made structures such as barns and other farm out-buildings, houses, bridges and tunnels. Some bats like the Pipistrelle prefer crevices; while other species like the Natterer's and Long-eared bats prefer large roof voids. The Greater and Lesser Horseshoe bats need a flight path into the roost itself and one in which they can freely hang.

From this information, we can start identifying the type of bat from the roost area and the way they roost. A tell-tale sign will be blackening made by oil from the fur around entrance and exit holes. It's worth noting at this stage that these roost sites are protected by law against disturbance; so be extremely careful when looking around for bats. Not only that, bats will leave the maternity sites if disturbed; thereby putting the pregnancy and /or young in jeopardy.

Bats mate during the autumn just before they hibernate for the winter, but, like some other mammals they do not become pregnant until spring. The female bats will form maternity roosts from May to June and, after about nine weeks they will give birth, usually to a single baby. The female bat will suckle their young in true mammalian fashion for about four weeks after which the young will venture out and start to fend for themselves, foraging around the areas where they were born.



A pile of Brown Long-eared bats!

UK bats feed exclusively on insects. Each species has its favourite and will hunt them in its own special way. You can determine the type of bat by the way it hunts and we will have a closer look at this later. Most insects are caught and eaten in mid-air, though bats sometimes find it easier to "hang up" and eat larger prey. Bats are constantly hunting and feeding. They often hunt where there is a good water supply which attracts water-loving insects or they will hunt around the outskirts of woodland rides and glades (and gardens) where there are the appropriate wild plants to attract the insect. They hunt mainly at night, although this April, participants on one of our courses and I were lucky enough to observe a Pip hunting along a forest ride at 3pm in the afternoon in broad daylight. An explanation from our local bat expert was that the bat may have just emerged from hibernation (it was a warm afternoon after a long cold spell), and the bat must have been extremely hungry.

Of course, the best-known feature about the bat is its ability to echolocate. They need this sense in order to find food and navigate



at night. The principle of echolocation is quite simple although quite intriguing. Bats produce a stream of high-pitched sounds at various high frequencies audible to bats (but not humans). The frequency depends on the species of bat. When the sound

waves produced by the sounds hit an object, the echoes bounce back to the bat. These are collected around the face and ears, which operate much like radar, alerting them to the location and dimensions of that object. This object can be food, obstructions or navigation signs.

This can give us another tool to identify our bat. All we have to do is identify the frequency that the bat "operates" on and voila... we have the type of bat. This is done by a piece of equipment called a "bat detector".

The bat detector is a hand-held device that picks up the frequencies that we can't hear. The box of tricks inside the detector "translates" the calls into something that we humans can hear and hence we can identify the bat by the type of frequency that the detector is on. We can also identify it by the series of squawks and squeaks that the bat makes. The most basic of bat detector allows the operator to tune into a frequency and to listen to any sounds coming in on that frequency. With practice not only can you identify the species, but what type of call it is making, for example whether it is feeding. Time expansion detectors tend to be the most expensive as they sample and analyse the sounds, allowing direct identification of the species.

If we delve into the murky world of technology, you should consider the specifications of your potential purchase. It should include a good microphone for picking up the sounds; Piezo, electret and myca are the microphone types in ascending order of price. You should also consider what you are going to use the detector for, i.e. general use or monitoring specific species; in which case the performance at a particular bandwidth will be important as will the readability of the screen.

The Bat Conservation Trust recommend the BatBox3, Magenta kit, Tranquility, Peterson D100; USA mini 3; or Skye SBR2100 but you really should start off by going on a local bat walk and looking at the various detectors available. Be aware that detectors can be quite expensive. Of course, if you are brave and clever enough, you can build your own, like fellow Woodlife Trails tracker, Richard. You can read how he built his bat detector here at nosh01.blogspot.co.uk/2013/02/bat-scanner.html

As I said previously, you don't have to rely on technology to be a good tracker. We have already seen we may be able to identify the type of bat from its habitat; but we may also be able to use another method to identify the bat. This method concentrates on knowledge of the habits of different bats and the way they capture their prey. This isn't an exact science but it may help us to track a bat!

The Brown long-eared bat comes out after dark. It usually flies very close to trees, which makes it quite difficult to spot. Its flight is slow and hovering, a bit like that of a butterfly.

If you see a bat flying very low over water almost skimming the surface, it is almost certainly a Daubenton's bat. They will catch

insects on the water's surface with their feet which may appear big for the size of the bat.

The Noctule is one of our biggest bats; Noctules emerge early in the evening, just as it starts to get dark. They can sometimes be seen flying in a straight line, high overhead. The Noctule looks about the same size as a starling, and has distinctive narrow wings. Pipistrelles emerge around sunset, and these are the bats that you are most likely to spot. They have an erratic flight - twisting and turning around buildings, streetlights, trees and hedges. There are three species of Pipistrelle and all look pretty similar: the Common pipistrelle, the Soprano pipistrelle and the rarer Nathusius' pipistrelle.

Serotine bats also fly quite high but they can scoop up hedgerow level to catch insects at this lower level.

I have it on good authority that Barbastelles come out 20 minutes after dusk. They too will swoop and catch prey at various levels. I hope Dave and I have provided a little bit of information about the secretive world of bats. Conservation of bats in the UK is an important issue, as bat habitats tend to be disturbed or even destroyed. Monitoring bats is important and if you are interested, I'm sure your skills can be put to good use by joining in a bat walk; these observe the number and types of bats in your local area. You might even consider becoming a member of the Bat Conservation Trust at <http://www.bats.org.uk/>

Good luck when you track that bat!



WHAT'S GOING ON DURING JULY & AUGUST

Plantlife – Bee orchids in flower. Grasslands at their best. Many other plants in flower; Foxglove, Wild Thyme, Teasel, Goldenrod.

Birds – Adult Cuckoos will be leaving; but juveniles will still be around. In August, some Swallows may also return to Africa. House martins, Swifts, Swallows will be flying in circles to catch insects

Insects – Lots of insect activity on grassland, like grasshoppers and crickets. Continued Dragonfly and Damselfly activity.

Butterflies – Look out for the more unusual species: Purple Hairstreak, Purple Emperor in woodlands, White Admiral and Sliver-Washed Fritillary.

Bats – Constant dusk to dawn activity

Reptiles – Newly hatched lizards and snakes are born in time for the hottest months of the year. Look out for adders and grass snakes basking in the sun.

Mammals – Mammals are busy raising this year's young. Hedgehogs mate. Roe deer rut in progress.



The Forager's Kitchen, Fiona Bird
9781908862617 RRP £16.99



Foraging may be the latest food trend, but it is a pastime that passionate cooks have long enjoyed. Eating 'off the land' means working with the seasons, bringing the tastes and scents of the countryside to your kitchen table, wherever you may live.

In *The Forager's Kitchen*, expert forager and cook **Fiona Bird** shares the knowledge she has gained from years of gathering food from the land. Whether you live in a large city, in open countryside or by the coast, if you open your eyes and follow Fiona's advice, you will find more ingredients growing in the wild than you could imagine!

Reader's offer:

The Forager's Kitchen is published by CICO Books at £16.99 and is available from all good bookshops, or call 01256-302699 quoting GLR 72V to purchase a copy at the special price of £14.99 including free p&p.

For more information, please visit www.cicobooks.co.uk

BUSHCRAFT & SURVIVAL SKILLS magazine

If you can't always find a copy of this magazine, help is at hand! Complete this form and hand in at your local store, they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. Just ask!



Please reserve/deliver my copy of Bushcraft & Survival Skills Magazine on a regular basis, starting with issue

Title..... First name

Surname

Address

Postcode

Telephone Number



Just ask!

If you don't want to miss an issue

THE BUSHCRAFT STORE



The most comprehensive range of products for the great outdoors including the TBS Boar range of knives - with more models to be added.

www.thebushcraftstore.com

Culver Nurseries, Cattlegate Road, Enfield, Middlesex EN2 9DS

Tel: 020 8367 3420



Your one stop shop
for Bushcraft!



TRACKING STRATEGY PLANNING (TSP) FLORIDA STYLE

**TRACKING THE PUMA
CONCOLOR CORYI
(FLORIDA PANTHER)**



I am passionate about animal welfare, and none more so than when animals are adversely affected by human interference. So, never being afraid of a challenge, and having the opportunity for a few days hard core tracking while on a recent business trip to America, I decided to bite the bullet and fulfil an ambition; to attempt to track the elusive Florida Panther, Puma Concolor Coryi. This necessity of raising the endangered Panther's profile is now more essential than ever before. Studies estimate that only 100 -160 Florida Panthers are left in the wild due to human intervention. We need to learn how to protect them and allow them to survive in their natural habitat.

I've always been an advocate of experiencing worldwide tracking skills and greatly enjoy hearing about others, so in this issue I will share a few aspects of Florida Panther tracking, whilst at the same time showing you how to devise a quick and easy method of pre tracking planning, named the tracking strategy plan, or TSP.

EXPLANATION OF A TSP (TRACKING STRATEGY PLAN) – A TSP is a set of guidelines or principles to follow to help you prepare a tracking event. My TSP is always based on another acronym to learn, which can be amended to personal circumstances, IMACH which means:

AUTHOR PROFILE:

Perry McGee

Son of the late Eddie McGee, Perry is no stranger to the wilds. With over 40 years experience in survival training and leadership, he has endured survival training and situations in all types of terrain and climates, gaining knowledge of survival scenarios all over the world. Perry loves helping others learn these skills and willingly assists others where possible. Perry is founder of the National Tracking School and author of a number of books including *The Tracking Handbook*.



- Information and Intention
- Method
- Administration
- Communications
- Health and Safety

In this issue I will explain each section of the TSP and show examples, while highlighting some fascinating facts about the endangered Florida Panther.



INFORMATION AND INTENTION:

TO HIGHLIGHT THE PLIGHT OF THE ENDANGERED PUMA CONCOLOR CORYI -THE FLORIDA PANTHER, BY RAISING ITS PROFILE.

In this section of the TSP it is imperative to state your intentions with a brief and decisive objective. In order to learn how to track any subject, it is necessary to research and discover everything about it. There are many methods, be it books, the internet, or even lectures and courses, but over the years I have found that the best way to absorb anything about a subject is to experience it. For the tracker to gain real time information, you need to get out there on the ground where you can. Realising an information and intention stage of any TSP can be difficult and expensive, so always try and ensure that the intention is attainable and achievable.

In this particular case it was easy, travel with my wife to the Southern State of Florida USA, leave her behind and travel to the Everglades by access road, air bus and then by kayak or foot to the areas where the Panthers live and start a geographical search.

The initial concept of highlighting the plight of the Panther, although commendable, had restrictions. Locating and tracking the Florida Panther seemed easy here in the United Kingdom, however travelling to its habitat with hostile terrain, constantly changing weather, humidity, daily raising temperatures and the necessity for constant rehydration, required serious planning and preparation. As I found out, this trip was to put my old survival skills to the test. So with a basic TSP and armed with a basic knowledge, off I flew to Florida.

On arrival, one immediate aspect that I had overlooked was the Panther's natural habitat, the staggeringly beautiful Everglades National Park and Big Cypress National Preserve with their abundant wildlife and vegetation. It had been many years since my last visit to the Everglades and I had forgotten its natural beauty. There was also another aspect I had forgotten, the presence of an old favourite of mine, thousands of America's largest reptiles, the magnificent American alligator. Southern Florida also happens to be the hurricane capital of the world, while its whole ecosystem has vast areas of swampland and wetlands which are mostly inaccessible. Another forgotten and important aspect was the limitations of time. As I was later to find out you can never have enough time in the Everglades.

To begin my account of the Florida Panther, let me start from the early days. The sub species name Coryi originates from Charles Barney Cory, a naturalist best known for his descriptions of birds, born in Boston in 1857. Cory first identified the Florida Panther as a distinct subspecies in 1896. In other states panthers are also known as cougars, mountain lions, pumas and catamounts, however in Florida it is exclusively known as the Florida Panther. It was cited on the official endangered list way back in 1967 and is Florida's state animal.

With an average lifespan of 12 years, standing at an average of 24 - 28 inches at shoulder, the mature animal can average 80 - 130 pounds, have an overall length including the tail, of 5 - 8 feet and they are mostly nocturnal. The Florida Panther, like many felidae (cats), sleeps through the day avoiding the heat, much the same as leopards in Africa, using the cover of dark to travel, hunt and feed. Panthers are crepuscular, that is, they are active mostly at dawn or dusk and often spend up to an incredible 18 hours a day resting before searching for food. If I

was to locate a sighting or sign, then it would have to be of the Panther elevated and resting in the day or travelling or hunting at night.

Tracking anywhere in the dark has restrictions and advantages, but the major disadvantage to tracking Florida Panther in the dark is its habitat. The swamps at night are simply treacherous and without proper equipment virtually impossible to navigate. Stumbling, splashing and struggling thorough mangrove swamps and sharpened tall grass creates noise and distraction and is counterproductive to any tracking. This noise combined with the visual restrictions caused by dense impenetrable vegetation and an unhealthy proximity to night feeding alligators made tracking the mostly nocturnal Panther very difficult to say the least.

In tracking and locomotion terms, the description of the Florida Panther is relatively simple, in that it is a diagonally walking feline, moving limbs on opposite sides of its body at the same time. Its glorious colour is a magnificent fawn coloured outer fur, similar to an African lion, often brandishing a lighter underbelly and black tipped long tail and ears. One method to distinguish the age of the Florida Panther is to notice any spots. At birth they are spotted and as they grow the spots fade. As they mature they rapidly develop the distinct cream or light underbelly and a distinctive right angled crook between the second and third vertebrae in the tail, thought to be inherited as a result of inbreeding. They also have a cowlick in their fur and the middle of the back.

When tracking animals or any subject, it's always an advantage to establish a physical range of the subject's ability. It is pointless searching areas where the subject has never been, or is unlikely to travel by reason of fitness, ability or territory. In the case of a Florida Panther, research to determine their range by electronic monitoring has previously identified that the Florida Panther can cover an area of approx 20-25 miles a day and that they are mainly restricted to the Everglades National Parks, although evidence exists that they once roamed over large areas of the United States. This incredible range of travel was far in excess of my human ability and trying to use stealth in such an environment was to prove useless. If the Panther was to be tracked, a process of investigative elimination would have to happen.

Its habitation in Southern Florida is both wetlands and drylands, although it prefers areas with lots of cover, with thicket swamps and freshwater marshland. In the dry habitat, the Panther sleeps and rests in vegetative areas of hardwood hammocks and Saw Palmetto woodlands (see image of the Saw Palmetto plant). In order to travel from one region to another, the Panther has evolved into a competent swimmer and excellent climber, which makes it difficult to track. The agility of the Florida Panther has to be admired, when hunting, the female adult Panther will often leap distances of up to 15 feet across difficult areas in order to catch their prey. This agility is combined with speed, as the Panther can reach up to 35 miles an hour.

Adult Panthers are together only briefly during the mating season which generally runs from October to March. When the female is ready to mate she will leave scent sign for the male to find in her territory and after mating will retire to a den and produce up to three kittens. These kittens are normally blind on birth and as previously mentioned are born with a spotted coat and distinctive blue eyes. These spotted coats fade as they grow and after approximately two months the kittens leave the safety of their den and venture with their mother to learn how to survive. In the early months young Panther kittens rely greatly on their mother's milk which amazingly, has as much as six times the fat content of a normal cow's milk, and explains why their growth rate is so fast. Indeed, by eight weeks the kittens can be an incredible nine times

their birth weight. When they reach about a year and a half they leave the mother and establish their own territory.

Once grown, Florida Panthers are solitary animals, feeding alone and establishing their own territory which can be an area up to an incredible 250 square miles, although the female Panther's territory is much smaller. These defined territories will often overlap and can involve disputes between the animals, sometimes leading to fights, injuries and death.

METHOD TO ENTER, SEARCH, LOCATE KNOWN PANTHER HABITAT AREAS IDENTIFY SIGN AND CAPTURE IMAGES.

The next TSP can be a little more difficult, and is generally a result of research with the relevant authorities. As a general rule a prior daytime visit to an area creates maximum possibilities, while research using maps and guides, acclimatising to the initial environment and contacting local Information Centres are vital. By locating areas where Panthers had been sighted and establishing boundaries and territory, the tracking could begin. With regard to my little adventure, daytime initial vehicular access to the area is made via the appropriately named Alligator Alley, or Interstate 75 and the US Highway 41, Tamiami Trail. After a brief arrangement with the authorities I began to enter the area at which I had an immediate realisation that in order to survive in such a harsh environment I would need to be careful.

The daytime humidity and temperature were sweltering and trailing sign would be nearly impossible without a deep insertion into the swamplands. The swamps and areas surrounding them were a staggering visual treat and the whole habitat was filled with a variety of magnificent insects, wildlife and exotic plants. At this point I also established another minor problem, humidity affects the effectiveness of cameras and recording equipment and for this reason I was limited in the images that could be used in this article.

On a different but important note, there was a depressing aspect of my adventure that became apparent on my arrival. Having been fortunate to visit before it became apparent that the Everglades have become far more of a tourist attraction than before, which is contributing to diminishing animal habitat. In an effort to close the distance between the Panthers' habitat and mine, believe it or not I hired a pedal cycle. It may seem ridiculous but most areas of Panther habitat are in inaccessible areas and regions, so in order to get closer it is necessary to travel by bike in the National Park on trails restricted to foot traffic or cycles. These are an ideal way of getting closer while also being a safe distance away from both the Alligators and the prying tourists.

As with all tracking, using your senses is essential and none more so when tracking Panthers. Using your sense of smell to

detect its scat and discarded food remains, which can identify its feeding areas. The Florida Panther is a carnivore and its favourite prey include racoons, small white tailed deer, feral hogs, rats, rabbits, birds and armadillos. This distinct diet makes for easy identification of feeding areas and finding the food source can lead to the subject. Another method of tracking is to find scat from the Panther's prey, so scat or other traces of deer may lead to Panther sign. In the same way, Panthers are not known to eat fish, but raccoons do and traces of racoon-devoured fish can also be indicative of the possible presence of Panthers.

The Florida Panther has a distinct method of killing prey, by attacking the animal's neck and spinal cord and then dragging the prey off to a safe place. The remains of a kill is often covered by vegetation in a form of cache and left for later feeding, often for a period of three or four days. Again using the tracker's sense of smell to detect decaying flesh or listening for the sound of increased insect activity near the prey, can lead to finding sign.

The scat of the Florida Panther is tubular and twisted, often dark with samples of hair, bone or pieces of residue and has measurements of up to 9 inches X 1.5 inches in diameter. The Panther does not cover its own scat or dig holes to bury it, and will

excrete and urinate in the same location. The scat will not be near its habitat or where its smell will attract predators.

Another sign is the Panthers' territory marks, or scrapes as they are sometimes known. Essentially the Panther uses its hind legs to scrape piles of dirt and debris approx 6-8 inches long whilst standing firm on its front legs. The Panther then covers them with its urine or faeces, which for the tracker can easily be sensed or examined for freshness

and texture. These scrapes are distinctive, often leaving groove marks in the surface of the ground and are used by the panthers to detect the sex of other Panthers. Incredibly, they can detect how long ago it was deposited. These scrapes are often added to by male Panthers as a way of communicating territorial issues and warning other inquisitive Panthers away. Adult female Panthers also use scrapes to identify their sexual readiness for breeding.

The Panther is a digitrade, an animal that walks on their toes and generally more stealthily than other animals. The sign or paw impression created by the Panther should normally be four unclawed toes surrounding a 3 lobed heel pad or metacarpal pad. The front two limbs are slightly wider than the rear and the sign of the male are much larger than the female. The average size of the male front limb metacarpal are usually around 5-6 cm or 2 to 2.5 inches wide and slightly less for the female. One important aspect about the Panther's locomotion is that when it walks it will often place its hind paws in the place of the fore, thereby confusing the initial print, or creating an over sign.

The Florida Panther does not roar aloud like the lion, preferring to chirp, scream, growl or hiss when disturbed. When in season, the female will often make a screaming noise similar to that of a



This magnificent plant is the preferred bedding of many animals in the Everglades and especially the Florida Panther. It is named the Saw Palmetto and has fan shaped segments with sharp spines. It grows to a tall height and the leaves drop to the floor, providing cover and insulation for the Florida Panthers who use this plant to rest on through the day or to create dens for their young.

human, which has led to the nickname 'screamers'. Initial enquiries with the local National Park information centre confirmed my growing suspicions that regrettably there are now only very rare sightings of the Florida Panther and these sightings have been mainly by passing motorists at night. Some sightings were met on occasion with scepticism, dismissed as sightings of the common Bobcat (*Lynx rufus floridanus*), which is much smaller than the Florida Panther, about the size of the domestic cat. On a positive note, those rare reported sightings of the Panther were mainly within the immediate area I had now located, within the staggering 729,000 acres of freshwater swamp in the southwest region of the Big Cypress National Preserve.

ADMINISTRATION NOTIFY ALL RESPONSIBLE PERSONS OF ROUTE, DESTINATION, DATE AND TIME OF RETURN.

This TSP is an easy one to remember and is probably the most essential for any tracking adventure. Notifying responsible persons and appropriate search and rescue units of your route and destination is paramount. Your own safety and that of others in your group may depend upon this TSP and informing responsible people or authorities with a stated return time, verified by a time check, should be instinctive. You should exchange communication numbers and emergency contact numbers, along with your group's description and details of any vehicles you are using. Identify the specific locations and routes to be travelled on a map. Asking about any local or natural dangers such as flash flooding or dangerous plants can avoid unnecessary problems. Note what time sundown is. Have the obligatory watch, compass, whistle, knife and heliograph or something else that can be used for ground to air signalling. Take fire-lighting equipment. Don't forget to show the authorities your footwear impression or better still demonstrate this by standing on a piece of material or paper and note down the size and style of your shoe.

The TSP of admin is a great way of checking aspects that you sometimes forget. I've often been tracking and either dropped vital kit in the dark, or lost it in snow or sand. Losing essential equipment soon raises awareness of just how vulnerable you can be. Adapt the old scouting motto, be prepared - anything can happen out there and it can happen to you.

COMMUNICATIONS ESTABLISH AND VERIFY ALL LINES OF COMMUNICATIONS

It may seem obvious but exchanging telephone numbers is not enough. Ask about reception failure or areas of interference. Ensure that any electronic communication system works in the humidity or wet and cold, or it is just useless baggage. Have spare equipment and batteries or back up plans in case of failure or breakdown and always check and double check radio channels. Do as we do here at the National Tracking School, have half hour radio checks and codes. Ensure that all ground to air signals are known and if needed explain vital signs and signals to the authorities. Ensure that code signs or call signs of emergency rescue units are noted and known as well as the appropriate channels.

HEALTH AND SAFETY REDUCE ALL CHANCES OF DANGER OR POTENTIAL DANGERS

In any outdoor activity or adventure, the chances of danger heighten your adrenalin and this can lead you to be foolhardy. The last but probably the most important part of the TSP is health and safety. I know it may not be everybody's favourite subject, but it is very important especially in planning for any tracking or survival adventure. If it is dangerous or there is a risk of it being dangerous, do not attempt it. Many explorers have lived to talk and walk away by leaving danger for another day. Even though you can never eliminate all unexpected events, the odds of danger can be

reduced by considering the possibilities.

As every decent tracker will tell you, water is the source of life and in order to survive, especially in hot or humid environments, a tracker should consume 2-3 litres of fresh water. Water is essential for the vital organs of the body to function and in my case it was simple, no drinking water, no tracking Panthers. In order to track for any length of time I had to carry additional water bottles and water purifying treatment. However the Everglades had another beauty, much of the water there is fresh water and if treated and filtered correctly it will sustain life.

A simple thing like carrying spare water and food, or having two knives, one for use and one for emergency could mean the difference between life and death. I always carry first aid or pre-packed survival kits and always plan so that I know where to find assistance. I was always taught that there is nothing tough or macho about being in danger, any fool can die. Time spent reducing the chance of danger allows the task to get done.

CONCLUSION

In conclusion then, having spent a considerable amount of time searching and tracking in the Everglades National Park and the Big Cypress National Preserve, it may not surprise you to learn that, despite all my best efforts and extended static listening and observing, combined with sweltering

humid silences, on this particular occasion, I was unable to locate and record any images of the Panther. I was however fortunate to locate the distinct image of a partial paw sign. I was also lucky enough to witness the truly breath taking environment of the Southern Florida Everglades and its magnificently diverse wildlife. Also, I have hopefully raised the plight of the Florida Panther and given you some tips on how to develop your own tracking strategy plan. With the threat of extinction from unlawful poaching, habitat destruction, and car accidents to contend with, the Florida Panther is desperately trying to survive. If fortune allows, I hope to get another opportunity to track this beautiful, elusive animal.



BUDGET KNIFE

Hello again and welcome to another Bushcraft on a Budget article. Last issue I showed you a bit of metal work with the stove windshield, well this issue I want to continue the metalwork theme, but up the game a bit with a budget knife made from an old circular saw blade.

As often happens whilst out on a walk, I saw someone throwing out something that I was sure I could make use of. A chap at a local tool hire store was fitting a new blade to a hand held petrol saw, the type they use to cut flagstones. He just threw the old blade onto a pile of scrap in the corner of his yard, so after a brief chat I was walking away with a big grin on my face and a saw blade in hand.

I have to admit that first thoughts were I could combine it with a baseball bat to make an awesome zombie bashing stick, but reality said I needed to make something I could actually use. Being the first time I have tried to make any sort of blade from an old saw, I thought a small knife would fit the task well to see how it turned out. I decided on a small skinning type knife that I would make as a gift for my boss at work, in the hope that next time he is skinning a deer he will remember me and bring me back a large haunch of venison. So this is how I went about it. The tools I used were a Dremel multi tool, a belt sander, diamond sharpening block, wet and dry paper and a pen. You will also need gloves and very importantly some safety goggles.

Decide on your design and try to work it with the natural curve of the blade, bearing in mind the steel at the edge of the blade is harder than that towards the centre, you will really notice this when cutting out your blank. Once you have decided, draw your design onto your saw disc. Using a cutting disc on my Dremel I steadily started to cut out the blank. This was much easier than I had first thought it would be. The metal cut quite well and cleanly. Take your time and avoid the disc getting too hot, if any blueing starts to appear stop as it's getting too hot. This didn't happen to me whilst cutting out, but I think that was due to a brand new cutting disc on the Dremel and I took my time. You don't want it to get too hot as this will affect the temper of the steel which we don't want.

Once the blank was cut out it was time to start shaping it a bit more to improve its look. To do this I used my belt sander. Here

AUTHOR PROFILE:

Ian Nairn

Make do and Mend' is Ian's Philosophy. He is a dab hand at all things creative, and would be a match for any skilled seamstress! His innovative ideas can save you pounds, showing you how to make kit from things that you might find lying around. He also has a long-standing interest in and extensive knowledge of woodcraft and green woodworking, which, combined with his other skills, makes for some great money-saving tips!



you have a danger of the blank getting too hot, so a tip is to keep a bucket of cold water to hand and when you feel the blank getting hot, dip it in the bucket for a while to cool off. Work steadily and carefully on your blank, you can always take a bit more off but you won't be able to add any back on if you take too much off. I rounded off the handle and smoothed out the lines until I was happy with the shape of the blade and handle. I intended to wrap the handle with Paracord, so I put a couple of small indents on the handle where I knew the cord would sit without slipping off.

So once happy, I rounded off the edges and got ready to put an edge on the blade.

I went for a single (scandi) grind, this was the easiest way and I feel the best for use too. Holding what was to be the cutting edge of the blade into the rotation of the belt sander, I proceeded to put an edge to the blade. Do this on both sides of the blade keeping it as even as you can.

You could draw

this in pen, but I just did it by eye and was very pleased with the results. Once the edge was done I swapped the belt on my sander to 100 grit and went over the whole knife again just improving the finish. After I had done the blade again on the 100 grit the edge was already shaving sharp as you will see from the photo of the blade with my hairs on. Then using a small cone shaped grind stone on my Dremel I shaped and sharpened the gut hook on the back. Again this was quite easy and gave great results.

All done!



1. The Saw Disc



2. Pattern Drawn On



3. Cutting Out



Top Tip

For the raw materials to make your own saw blade knife you obviously need saw blades. Keep your eyes open and don't be afraid to ask your local tool hire shop if they have any scrap blades, they sometimes have to pay to get rid of them. I intend to pop back in to the one I got this from and see if I can strike a deal, if I make the guy a knife, will he keep me all the blades, can't hurt to ask. You may know someone who uses them in their job, ask them. Don't miss out on this great source of good quality steel.

4. The Rough Blank



5. Starting The Shaping



6. Shaving Sharp

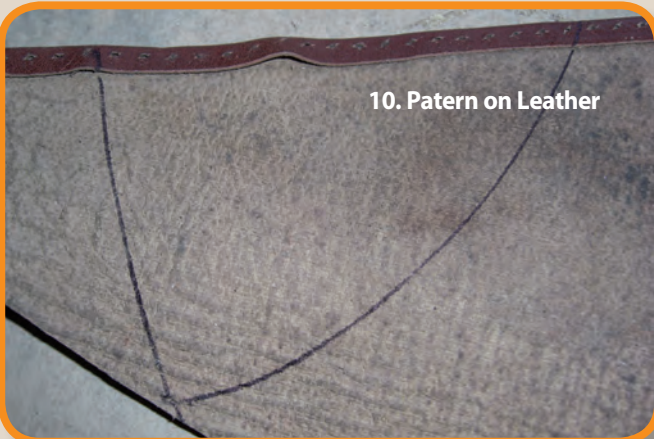


7. Polishing The Blade



To finish off the "finish", I took some 1200 grit wet and dry paper and rubbed down the whole knife to polish it up a bit, taking care to watch that sharp blade. I rolled the same wet and dry round a chopstick to finish off the gut hook too. I was and am very pleased with the results. Ok if you look closely you can still see some slight scratches and it's probably not to the finish a professional knife maker would give, but hey! It's my first hand made knife from a saw disc blade and I am very happy with it.

10. Patern on Leather



I wanted a Paracord wrap on the handle so I simply used a handle wrap technique that leaves a loop at the finish that you pass the working end through and pull the opposite loop to pull it all tight. I cut off the ends and melted them to seal them off. To make a sheath I took some old scraps of leather (from an old handbag) drew round the blade, moved out about 3mm and drew again. I had used leather that already had stitching holes down one edge, so after poking stitching holes down the other edge I simply used a saddle stitch to sew it together using artificial sinew. I popped a small steel rivet in to help strengthen it and as a safety device to stop the knife falling out if upside down.

Over all this has been a very pleasing little job and I know it will definitely not be my last knife made from a saw disc, I can see specialist carving blades being done in the future too. I hope if you have a go at this that you have as much fun as I did and that you are as pleased with your results. Like I said, this will be a gift that I know will be used so that made it a pleasure to make. I will make myself something next from the metal I have left. Let's just hope I don't regret not making that zombie bashing stick eh? So until next time keep it on a budget and have fun making your own kit.

8. Blade Protected



9. Handle Wrapped



11. Ready for Sewing



12. Sheath Done



Woodland Crafts ■ Trees & Wildlife ■ Timber ■ Eco-Living

Living Woods Magazine

Bi-Monthly ■ £3.75

Women of the Woods
The chairmakers changing the face of our forests

Coppice Garden
Projects made from trees at home

www.living-woods.com
Blogs, listings and resources online

SUBSCRIBE TODAY FOR ONLY £19.50
www.living-woods.com or 01285 850481

Have a Go!
Wood Food Guide: making birch beer
Harvesting bark
Wellie boot rack
Make a traditional shaving horse
Weave a fence
Sharpening tools
Growing willow




Woodsman Bushcraft

Wilderness & Survival School

Coventry West Midlands

Tel: (024)76980630

www.woodsmanbushcraft.co.uk
info@woodsmanbushcraft.co.uk

MAGAZINE BINDERS

£12.95 each or
£10.00 each for
two or more



call 03334567123 (option1) to buy, or visit
www.bushcraftmagazine.com to buy online.

FOR A DIFFERENT WAY AT LOOKING AT GIFTS VISIT

— 1948 —
ORIGINAL EQUIPMENT




We specialise in Travel Equipment and Expedition Gear. Our products are built to last; we are not part of a disposable society. Many of our items are designed and made by master craftsmen; they will endure and become part of your legacy. Take a look at our web site or see us at Bushcraft and Land Rover Shows.

**"The past is behind, learn from it.
The future is ahead, prepare for it.
The present is here, live it"**

www.originalequipmentsshop.com

THE FORAGER'S KITCHEN

My great aunt Primrose was born on Primrose day but sadly, only a generation later many people haven't a clue when Primrose day is (19th April). Intensive farming and machines that cut hedgerows mean that many of the meadow and hedgerow flowers of my childhood are no longer in abundant supply.

AUTHOR PROFILE:

Fi Bird

Fi Bird is a graduate of St Andrew's University, mother of six and a past Masterchef finalist who is self-taught, with a passion for cooking. Her local food supplies vary from hedgerow, moors and woodland and with help from her family, supper is 'off the land'. She is a member of the Guild of Food Writers and in her spare time she campaigns for healthy diets and cookery teaching for primary school children.



I had to make searching choices about which flowers to include in my book *The Forager's Kitchen* and which to leave out. Whilst researching recipes such as Fairy Butter in old cookery books, I came across a plethora of recipes using cowslips, which is now a protected species. My recipes use small quantities and come with a warning: flowers are beautiful, leave plenty for others to appreciate and be guided by your nose.

Scented food is not to everyone's taste, so wean friends into your scented kitchen gently. Change the perfume of your food with the season: Primrose (*Prima rosa*) actually means first rose or flower of spring. Foragers need to go with the maxim: small is beautiful. If a foraging cook picks too many elderflower buds, there won't be as much blossom and if too many bottles of blossom cordial are made, there won't be as many berries for Pontack or elderberry jam. Edible wild blossoms can be used to make sugars, syrups, vinegars and in baking. However, insects are attracted to and create pollen from blossom, so foragers need to leave some for the bees and in autumn, fruit for the birds.

Traditionally, country folk used flower blossom in syrups and wines and more recently this practice has been taken up commercially, as fragrant blooms are captured in pretty, artisan bottles. But the foraging experience can't be captured in a shop jar or bottle, you

over a quarter of a mile away. The delicacy of this summer blossom is endearing, so harvest it carefully to make refreshing floral tea, syrups and cordials. Use scissors and a light touch to snip the blossoms, their fragility will be all too apparent. A plastic bag with a damp cloth in it will keep the honeysuckle blossoms from drying out, but I suspect many will have disintegrated by the time you reach home. Like many other edible flowers, if you are busy you can freeze them and use them at a later date.

Honeysuckle blossoms can be added to flavour crabapples, or the steeped fragrant liquid can be used to make a stand alone jelly: add 450g of granulated sugar to each 600ml of the strained, honeysuckle infused liquid. My sorbet recipe includes some culinary magic - demonstrating honeysuckle's colour changing properties. I've married the sweet honeysuckle syrup with sorrel, which was used by cooks before lemons were readily available.

HONEYSUCKLE and SORREL SORBET

Sheer deliciousness and science magic—the honeysuckle blossom water turns pink when the lime is added to it, while the sorrel introduces a sharp twist to the sweetness.

What to forage and find:

- * 4 handfuls (50g) honeysuckle blossoms (green bits removed)
- * 2 1/2 cups (600ml) boiling water
- * 2 1/2 cups (250g) superfine (caster) sugar, to taste
- * Juice of 1 small lime
- * 2 small sorrel leaves, very finely chopped

What to do:

1. Put the honeysuckle blossoms in a bowl with the boiling water, cover and leave to steep overnight.
2. Strain the liquid into a saucepan and add the sugar. Heat over low heat to slowly dissolve the sugar, then boil rapidly for 3–4 minutes to thicken. You should be left with about 2 scant cups (450ml) of liquid.
3. Add the lime juice and here is the magic: it turns PINK. Allow to cool.
4. Add the finely chopped sorrel and churn in an ice-cream machine until it is frozen.
5. If you are making this without an ice-cream machine, put the honeysuckle mixture into a freezer-safe container and freeze until slushy. Return the mixture to the bowl, beat well (or whiz in a food processor), and return to the freezer. Repeat this process until you can't see any ice crystals, and then freeze until frozen. Eat this smooth pink sorbet as soon as possible—it will melt quickly.

(NB) if using larger quantities of honeysuckle blossom (consider sustainability) it is really important to remove anything green (as in my sorbet method) because as with many flowers, green discolours or adds bitterness.

Fi Bird is currently writing a book about seaweed.



need to do-it-yourself. The blossom syrup recipe is easy: pick in sunshine and then steep the well-shaken flowers in boiling water. When the liquid is cold, strain the scented water. As a rule of thumb, add twice as many grams of sugar to millilitres of liquid and dissolve the sugar slowly, over a low heat. Some blossoms are sweeter than others, so the precise sugar content is a matter of taste. Wild Honeysuckle *Lonicera periclymenum* Honeysuckle attracts bees and butterflies and its scent is particularly strong on a still night. Moths are said to be attracted to the heady perfume from

Book Reviews

REVIEWED BY BEAU BEAKHOUSE

HAYNES OUTDOOR ADVENTURE MANUAL

Price: £21.99

Publisher: Haynes

ISBN: 978085733282

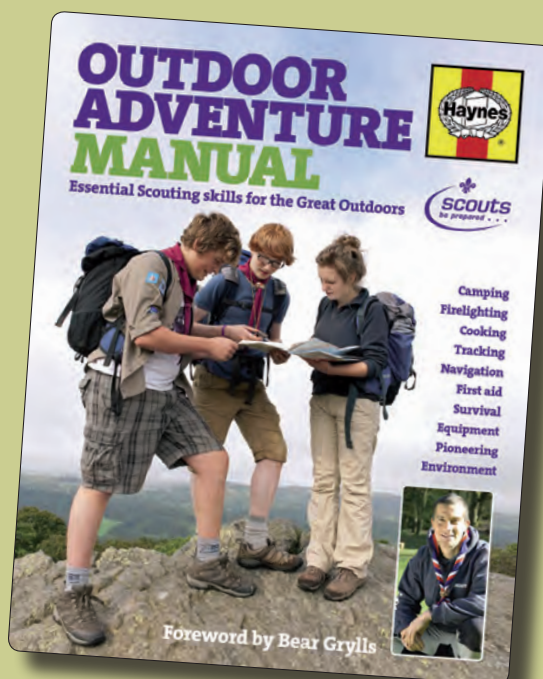
Authors: Written by a team of experienced Scouting volunteers in collaboration with staff at The Scouting Association. Including some of our writers for Bushcraft & Survival Skills magazine.

Haynes have teamed up with the Scouting Association to publish this useful, highly illustrated book on the basic skills needed to make the best of life outdoors.

Key quotes are placed throughout the text, particularly in the introductory sections and these quotes, alongside 'how to' sections give the reader a broad understanding of the topics covered.

While the book's target audience will predominantly be children or younger adults, sections of writing are more than appropriate to an adult reader.

The book is based on scouting skills and activities and it encompasses many of the fundamentals of Bushcraft, with an emphasis on self-reliance, respect for nature and teamwork.



This book is not extensive and at points would benefit from additional information, which the reader would have to gain from individual books on specific subjects, but as an overview and introduction for those less familiar with outdoor activities it will be a useful guide. For the younger reader a bibliography is not a priority and this book does not contain one, but the acknowledgements section does provide a few additional web links to gain further information.

However the skills taught in this book should be

applicable to everyone, not just those who are interested in scouting, but anyone who wants to increase their knowledge about the outdoors.

FORAGERS KITCHEN

Price: £16.99

Authors: Fiona Bird

Publisher: CICO Books

ISBN: 978190862617

The Forager's Kitchen by Fiona Bird is at its core a food cookbook that lists over 100 wild food recipes. These recipes all use natural, foraged foods that the author gives expert advice on.

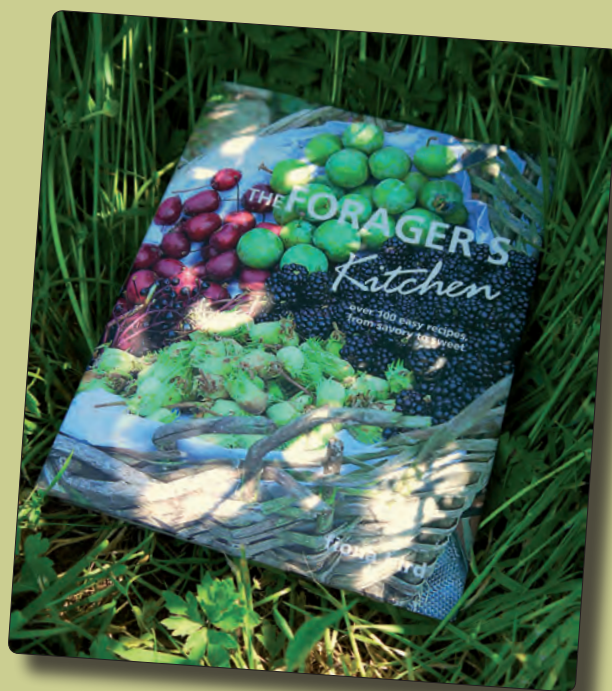
The introduction is expressively written and draws you into a world of gathering your own food from the natural environment.

The book has been designed to accompany a plant identification guide and to expand the use of edible foods into creative dishes. To this end the recipes are grouped into chapters; Flowers and Blossom, Woodland and Hedgerow, Fruits and Berries, Herbs and finally, Sea and Shore. In amongst each dish are facts on the gathered foods and the history behind them, as well as how to find, forage and prepare the collected items.

The book's recipes include ingredients from nature, but the overall dishes that can be created are not all from foraged sources. The main ingredients are often not ones from nature and so the idea of making a full dish out of all organically sourced foraged items is not really a possibility. As it is clearly designed for use in a kitchen, the book doesn't have bushcraft style meals that could be made without the need for previously bought foods.

Having said that though, this book is well laid out, with pictures that equal the high standard of the written content. The book works as a

cookbook, as well as providing the initial motivation for getting out there finding and foraging food.



WIN A COPY OF THESE BOOKS.

Send in your details to win a copy of one of these books, detailing which you would like to win.
(see T&Cs p3)

WIN!

Just what you have all been looking for...



KIRTLEY KETTLES

"Excellence in adventure"



- Traditionally styled robust aluminium Camp Fire Kettles
- Available in four sizes, ideal for solo campers to large groups
- **New Campfire Outdoor products now in stock!**

AVAILABLE AT ALL OUR TOP OUTDOOR SPECIALISTS

Email: sales@campfireoutdoor.co.uk Tel: 01722 413532

www.campfireoutdoor.co.uk

Casstrom No. 10 Swedish Forest Knife
A great multi-purpose knife with a full-tang Scandi grind blade in Austrian 02 High carbon tool steel (HRC 58-59)

Sturdy veg. tanned leather sheath

Available in Oak, Bubinga and Micarta

- High Strength
- High Toughness
- Easy to Sharpen



RRP £69.95

Sold by recommended retailers

EKA
ESKILSTUNA SWEDEN

KARESUANDO
KNIVEN

Wood Jewels
High Quality Knives

FEUER
HAND

Dianova

KUPLKA

Hultafors

blade tech

JOKER

ERZO

t: 01628 330 330

e: service@casstrom.co.uk

w: www.casstrom.co.uk



Casström

The knife supplier of choice

www.jackravenbushcraft.co.uk



Summer Offer

Buy one get one free
on all 2013 bushcraft
experiences booked in July*

*not including 'Blacksmithing, Bodgeing and Bushcraft'



www.jackravenbushcraft.co.uk
info@jackravenbushcraft.co.uk
T - 07553 763397

We are located in Challock, Kent
In an Area of Outstanding Natural Beauty



PICTURE PERFECT

PART 3 - BUILDING A PICTURE

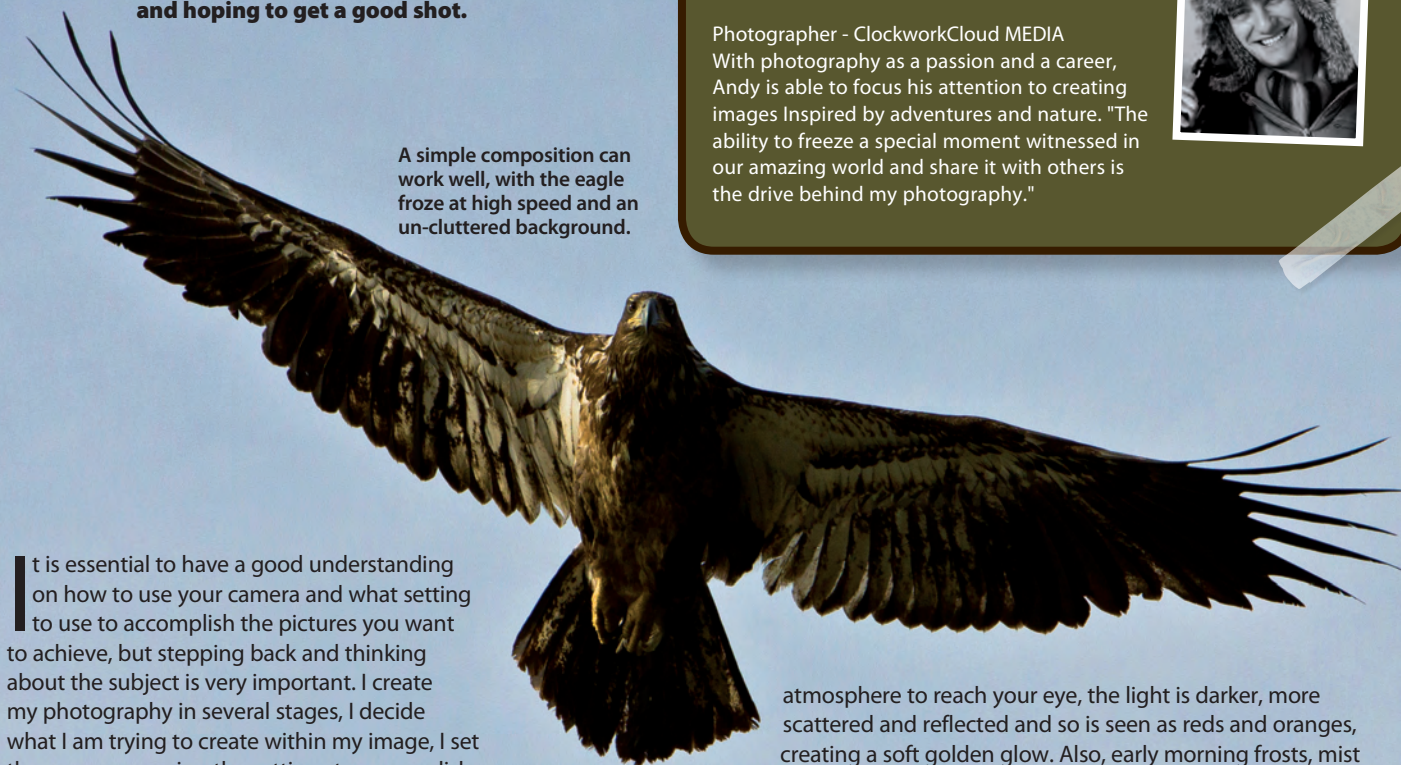
In the last two issues of the magazine we have looked at the choices of camera available and camera control and settings. This time we will look at how a picture is built and constructed, thinking more in depth about what we are shooting, instead of just rattling through a series of images and hoping to get a good shot.

A simple composition can work well, with the eagle froze at high speed and an un-cluttered background.

AUTHOR PROFILE:

Andy Childs

Photographer - ClockworkCloud MEDIA
With photography as a passion and a career, Andy is able to focus his attention to creating images Inspired by adventures and nature. "The ability to freeze a special moment witnessed in our amazing world and share it with others is the drive behind my photography."



It is essential to have a good understanding on how to use your camera and what setting to use to accomplish the pictures you want to achieve, but stepping back and thinking about the subject is very important. I create my photography in several stages, I decide what I am trying to create within my image, I set the camera up using the settings to accomplish my desired results and then I focus a lot of attention to what is required to build my picture.

Let's break some of these steps down in this article so you can have a think in more detail the next time you are out shooting pictures on your adventures.

LIGHT

Light is a crucial aspect of making a picture stand out from the rest. Capturing light is the key objective of a camera and its ability to capture the light and create a moment is what makes photography special. The camera can capture many forms of light, for example, you can use the morning sunlight to add real beauty to a shot or you can even use the camera to expose light for long periods of time, capturing scenes that the human eye can't naturally see, like stars streaking across the night sky as the world rotates.

Quality of light is the big factor when it comes to photography. A lot of photographers seek out what is called the golden hour to shoot their photography. This is the first hour after sunrise and the last hour before Sunset. "Hour" is a bit of a loose word and it's not technically just an hour, but the whole time period through dawn and dusk that creates a magical soft light when the sun is low in the sky. As the light from the sun has further to travel through the

atmosphere to reach your eye, the light is darker, more scattered and reflected and so is seen as reds and oranges, creating a soft golden glow. Also, early morning frosts, mist and dew are just another dimension that is only witnessed early in the morning. It's not always fun rising super early or hanging around once the sun has disappeared, but when there's nobody around and you are capturing the beautiful light that others are not prepared to make the effort to find, it is hard not to feel a little satisfied at the images you are capturing.

It's a great idea to check your weather forecast closely as this indicates what light you might expect to find. Remember, this is not always accurate and sometimes when you think it's really not worth the effort as the weather is grey or the forecast says it's going to rain, this can sometimes turn out to be the most dramatic light. Don't be disappointed if the light does not work out because at least you know you tried.

Sun and moon phases are also worth checking, knowing exactly what time the sun will rise/set and its exact direction throughout the seasons will give you further knowledge to achieve your shots. Also, when shooting star photography it is good to have a night with very little moonlight to help keep the dark of the night inky black and the stars super bright.

Using flash is also a great way of adding light to an image when the natural/ambient light is just not enough. Flash photography, like all areas of photography, is a feature within itself so I will just touch on this briefly. A major point to learn about flash



The golden hour adds soft warmth to images

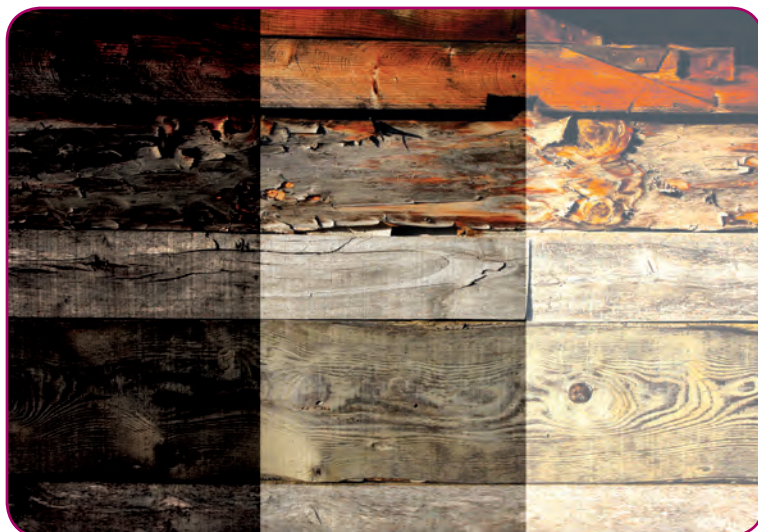
photography to prevent your images looking like the harsh results that many standard flashes produce, is that flash is best softened or bounced. Direct flash from in front of the subject will usually be harsh and bright, will leave strong casting shadows and look unpleasant. Using a simple plastic diffuser, soft box or umbrella will give great results. Obviously using external flash(s) and accessories, either off or on the camera can be an expensive and tricky option to use, but there are a lot of low cost brands on the internet that can offer some stunning results for a budget price and learning to use them can be well worth it.

It is also important to consider the angle from which the light is coming, as lighting your subject(s) with the light source in front, from the side, above or from behind will give you very different results. For example, if the subject is back lit, with the sun behind them, you can create dramatic silhouettes. Again, the angle of light is determined by time of day and whether you are using natural or artificial light.

Whatever light you use and however you choose to use it, it's vital that you achieve the correct settings on the camera to use that light to produce a good exposure. Exposure in simple terms is how light or dark your photograph is. If the image is under exposed and not enough light is captured then the end result will be dark and flat. If the image is overexposed then the image will be too bright and will look washed out. A correct exposure is determined by several factors, the simplest being if it looks correct it is correct. You can get more in depth and technical by starting to learn about shadow/ mid tones and highlights including the use of histograms to get them perfect (more advanced techniques on these subjects can be found with a quick search on the internet). Achieving the correct exposure is a matter of balancing the three main components of aperture, shutter speed and ISO, as discussed in the last issue. If a picture is underexposed it requires more light and this is achieved through opening the aperture or decreasing the shutter speed. If the image is over exposed then it requires less light and this can be corrected by closing the aperture or increasing the shutter speed. It is also possible in some circumstances to adjust the ISO to increase or decrease your shutter speed to gain a correct exposure. Also adding artificial light or flash will add extra light to an under exposed image.



Using flash is a way of adding impact and can be mixed with natural light. This flash has a simple white plastic diffuser cap over the top to soften the light



Under exposed

correctly exposed

Over exposed

COMPOSITION

Composition is a series of basic rules that add creativity to an image and these rules have been performed and explored by photographers for many generations. It is well recommended to explore these areas in detail as they have been proven through the years to be the building blocks to create strong images.

Rule of thirds: To achieve the rule of thirds you first need to imagine your picture split into 9 equal segments as a grid (see image right). The idea is to place the main subject on one of the four intersections. It is also important to try and place any horizons or horizontal/vertical lines along the imaginary grid lines. This helps to achieve a balance within the image.

Lead in lines: Creating a path or visual line through the image towards the main subject is a great way of leading the eye into the picture. You can use many subjects to achieve this including roads, paths and streams.

Foreground interest: Adding a subject to the foreground of an image, especially within landscape photographs, can create a much more impactful image. A common object used is rocks and these help to fill often dead space in the foreground of a shot.

Level horizons: In most cases it is essential to have a level horizon within an image, having the horizon off level makes the image look somewhat messy. You can achieve this using a small spirit level that fits on the top of your camera (mainly for DSLRs) and some tripods have levels built in. If you do capture an image with an unlevel horizon it is possible to correct this on your computer using software, but it is much better to capture it correctly in the first place!

Scale: Adding a common subject within an image helps define a sense of scale. So if you have a grand range of mountains, capturing a series of climbers within the image will help to identify the scale of the mountains, as we can easily recognise common objects and our brain can determine their recognised sizes against other objects.

Angle: The angle is a crucial and often overlooked area in capturing a great shot. Lots of images lack excitement even though they could be an amazing capture as the same old angle delivers boring results, while putting in a little bit of effort and thinking about an unusual and different angle can often add a great dimension to an image. Getting at a low or high angle, where you are looking up

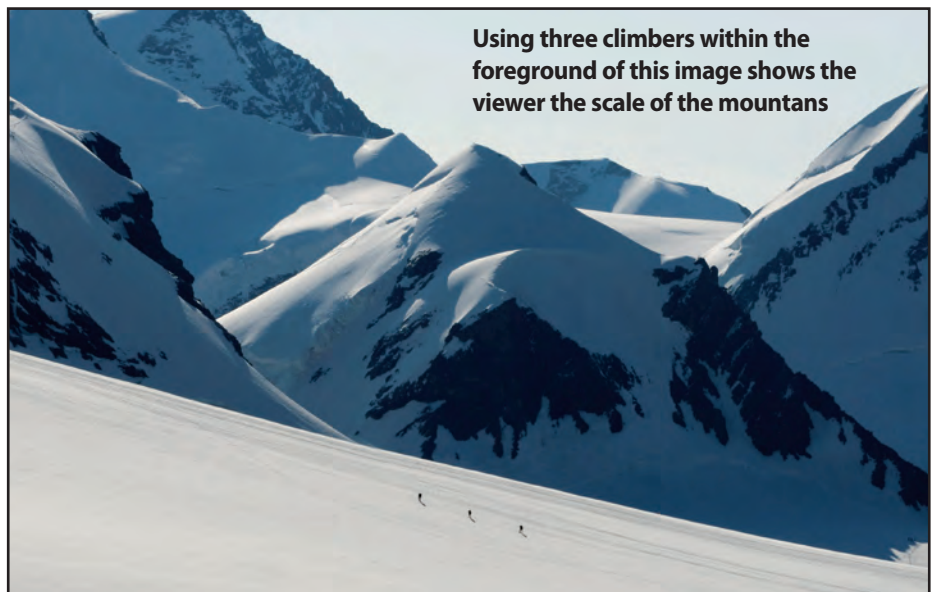
The rule of thirds, also note the level horizon

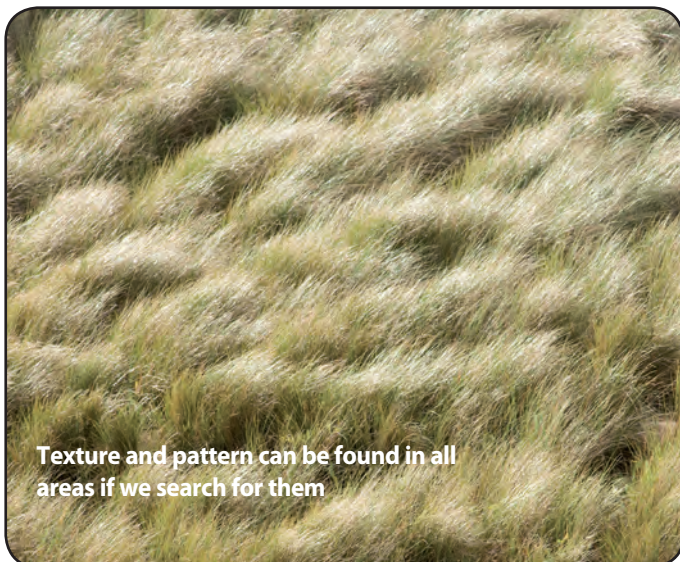


Lead in lines such as this road help to lead the viewers eye towards the main subject



Using three climbers within the foreground of this image shows the viewer the scale of the mountains





Texture and pattern can be found in all areas if we search for them

or down at the subject, creates a lot of interest and shooting a subject from an angle we are not used to seeing in day to day life looks clearly different. We get used to seeing things from standard angles and showing people the world from a different perspective will open their eyes to your images!

Shape, textures & pattern: Looking at shapes within photography can create interesting images. We often don't see shapes within the world unless we stand back and think about it. Great, unusual shapes can often be seen in the most unlikely of places and with a bit of thought you can incorporate this dimension into your work. Symmetrical shapes often work well through the centre of images (therefore breaking the rule of thirds), so don't be afraid to try different things!

Texture and pattern is also everywhere around us and searching for them through the lens can also result in great new images. Using the time to think about these areas not only improves your photography, but helps you to get a more in-depth awareness of the space around you.

Focus Length: Focus length plays a big part in the outcome of an image, we can have endless choice with lenses that offer very broad focal lengths and often photographers can own many lenses that offer a variety of range. The choice depends on what you are shooting and the way you want to capture it. Experimenting with focal length will allow you to gain knowledge on what works for what subjects.

Simplicity: We can often get carried away and try and make images more complicated than they need to be. Keeping your work clean and simple can have huge impact on the end results. Often less is more and a simple subject captured in beautiful light can often be the recipe for success.

DEPTH OF FIELD (DOF)

Depth of field is the plane of focus within an image; this is basically what's sharp and what's blurred within your picture. This is a powerful way of making your subject stand out from its background, if you want to emphasise a single point or object within the shot. On the other hand if you want to get maximum sharpness throughout the image then a wide depth of field will create this result. We achieve these results through the adjustment of the aperture, as discussed in the last issue.

TOP TIP

When out capturing shots at sunrise/set and when the light is at its most beautiful, don't forget to look behind you. We can be so fixated by the beautiful ball of light rising or setting, we can forget to look the other way. Often the sky directly opposite a sunrise/set can create an incredible pastel set ranging from chalky blue's and greys right through to rich pinks. Keep your eyes peeled!

SHUTTER SPEED

It's important to make a decision on shutter speed as this can have a big impact on your image, as we looked at briefly in the last issue we can use shutter speed to freeze action and also create blur and motion within the shot. We can use either slow or fast shutter speeds to create these effects. Shutter speeds are measured in fractions of a second (for an example 1 Sec, 1/2 Sec, 1/4 Sec, 1/8 sec, 1/15 Sec and 1/30 Sec) determining what is a fast or slow shutter speed is tricky to explain as it depends on the speed/movement of the subject and what focal length you are shooting at, again trial and error is the best way to learn what shutter speeds to use for each subject. If you don't have a tripod for slower shutter speeds and need to eliminate camera shake, a good rule of thumb is the slowest shutter speed you can hand hold to achieve sharp and non-shakey images is the focal length of the lens being used. So a 50mm lens can be hand held at a minimum of 1/50 Second and a 200mm lens can be hand held at a minimum of 1/200 of a second.

CAPTURE THE MOMENT

Telling a story through your work by capturing the moment can be a very expressive style of photography. It takes time and practice (sometimes a little luck as well) to be able to record that precise and perfect moment, but in essence, the joy of photography is being able to capture a split second in time and let it last forever.

CONCLUSION

There are lots of guidelines to photography and a lot of set rules to work to that will create a great image. Whilst I agree with the guidelines and following them will improve your photography greatly, another beauty of photography is the fact that there is no real right or wrong. You have the ability to create what you want, how you want and breaking the rules can often create stunning results. I think the most important point I am trying to make is that it's essential to think about the image. Incorporate the standard and well-respected guidelines of photography and/or go beyond these rules and don't be afraid to explore an idea you have even if it's a little unusual. Whatever route you take you must be thinking about your images in more depth, losing the point-and-shoot emphasis of random snapping. Thinking about the image and what's around you will give new life to all your photography.

You might find inspiration to further your personal photography skills by viewing some more of my work at www.clockworkcloud.com

A VARIETY OF COOKING CRANES



For this article I thought we would take a look at some useful campfire cooking furniture, made from natural materials to suspend your cooking pots over an open fire. These cranes can be used to control your cooking in a more structured way and manage heat efficiency for the appropriate cooking style - whether you need to warm, simmer, boil, grill or roast!

Correctly constructed, your cooking furniture will also make your fire a safer place to work, allowing free movement around the fire, but also restricting access to the fire where appropriate. Properly thought out and correctly used, they will allow for a reduction in the potential for harm from spills and scalds. The cranes will also improve the ability to manage and develop the fire throughout the cooking time, whether you need to alter fuel levels or change the shape and layout of the fire; whilst at the same time being non intrusive when not in use. They can also be constructed to allow multiple cooking pots to be suspended around the same fire at the same time, allowing items to be cooked at different temperatures.

A modern cooking frame



There are a wide variety of modern day pieces of equipment that have been produced in strong durable materials to do the same job - from metal tripods and suspension arms, to pull out wire meshes and support stands. Although there is a suitable time and a place for such items, there is a danger that the essence of Bushcraft can become lost the more non essential kit we carry. On one hand there is my favourite type of outdoor cooking, using only natural containers, hot rocks, pit ovens etc. I will be writing more articles on the subject but in the mean time if you would like to find out more, a good resource is Primitive Living, Self Sufficiency and Survival Skills by Thomas Elpel. On the other hand there is the opportunity to purchase everything from your local Bushcraft Emporium and carry 20 kilos of tripods, cranes, Dutch ovens, billy cans etc. Whereas sometimes it is wonderful to cook in a pit oven, more often than not it is not practical for most people for a variety of reasons - be it time, skill set or resources.

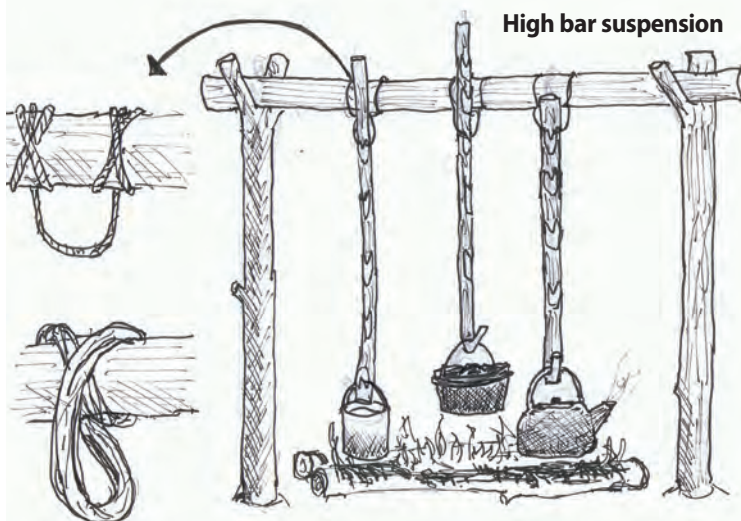


natural cooking frame

AUTHOR PROFILE:

Jason Ingamells

Jason Ingamells needs little introduction, renowned as one of the UK's leading authorities on bushcraft skills and owner of Woodland Ways. He takes pride in teaching to the highest standards on courses at home, abroad and mentoring his staff. Jason writes on the subject in books and magazines and is a highly skilled woodsman and overseas adventurer. His skills have been gleaned through extensive personal applied experience, practicing and developing these skills in real circumstances.



High bar suspension

Making and using the following cooking cranes can be a happy medium between these two extremes. They can be used for a light weight billy, or a more heavy duty cast iron Dutch Oven, without the need for carrying extra equipment. This project will further your bushcraft knowledge by developing your woodcraft skills, including tree identification, material selection, knife work, fire lighting and management and ultimately backwoods cooking.

The following three cranes are certainly by no means exclusive to me! There are variations described in a number of different books available on the market, in my view probably the best are Bushcraft by Mors Kochanski and Wildwood Wisdom by Ellsworth Jaeger. The main thing is to take the concept and then adapt to suit your circumstances.

Let's take for example a look at what we use in one of our main fixed camps, which is a variation of a "High Bar Suspension" referred to by Mors Kochanski in his book. The one described here is within the huge canvas/willow structure we built to keep the rain off groups.

High bar suspension in large shelter



In our shelter we have a huge tripod with a footprint of about seven metres supporting a ten metre square canvas, with the fire pit in the middle. This allows for a fire hearth of around four metres in length, should we need it. We have it this large to enable us to produce four and five course meals over the fire, with all dishes cooking away at the same time at different temperatures.

It has to be sturdy to take the weight of five or six full Dutch Ovens, and yet flexible enough to allow us to add/remove fuel whilst working around it, without destabilising either the cooking structure or indeed the pots. The suspension bar diameter is of the thickness of the wrist and was seasoned before use to ensure there was no flex in the material. As it is suspended six foot above the fire there is no danger of the seasoned wood catching fire. It is lashed on to two supports of the large tripod using a square lashing. Now admittedly this is BIG, but it is fit for the purpose we need it for.

However, even if you are having a communal fire for just a handful of people I cannot recommend enough that you try out a High Bar Suspension in some form. It opens up the fire for so much more of a practical use rather than just placing a purchased piece of kit over it, even for drying kit and smoking items. I remember when I first saw an example many years ago in a picture I thought it would be over kill. As always, I tried it... and I cannot tell you how amazed I was, it transformed my fire side experiences.

Now it is unlikely that the vast majority of you will have a 20 foot natural tripod at your camp but the diagram shows you how we do it at other camps using two forked sticks as supports for the suspension bar. It is the attention to detail that will make this a success for you.

When selecting your forks make sure they are sturdy, again about the thickness of your wrist, and think about timber selection. Aim to select material with a central fork rather than a branch shooting out from the side, this will ensure that the weight passing through

the suspension bar is evenly applied down the centre of the support. These should also be straight and true. Ash is perfect if you can find it, hazel tends to have started a twist by the time it gets to a large enough size.

Your supports need to be suitably spaced into the ground so that the heat from the fire will not burn them. They also need to be secured deep enough into the ground to prevent movement. If you get movement it may be necessary to secure extra pilings around the base to increase stability. For a completely sturdy suspension bar it is best to use a seasoned piece of wood, as green material will flex and therefore be unstable. If you cannot use seasoned wood and you are looking at a long term camp, you could always construct it and not use it for a while as the heat from the fire will harden the wood quicker than naturally. If you rush and use a green bar and place a heavy Dutch Oven on it the danger is that the bar will set in a bowed shape, resulting in it being impossible to safely hang more than one pot from it as the others will always slide down from the sides towards the middle.

Once your forked supports and suspension bar are in place, move on to make your adjustable pot hanger.

Again there are numerous examples of how you could do this, although I do have my preferred. In our camps we select a very long stem with a side branch coming off. Trimming of this side

branch to a couple of inches will allow the bail arm of your pot/oven to sit securely in place- even if the pot swings around a little it cannot fall off. Then in increments of four to five inches, cut notches in the stem, the same side as the side branch coming off. This is important for the balance of the pot. To make the notches create two stop cuts in an X shape by placing your hand on the back of the knife and pushing down through the fibres with your knife. Then carve up to the stop cuts removing three of the four triangles. Leave the triangle which is pointing towards the side limb - i.e. downwards. Finally deepen the wedge of the hook to make it more secure. This hook is nicely illustrated in the book *Bushcraft* by Ray Mears (page 23).

To secure the pot hanger to the suspension arm, make a loop

out of a withy or length of cordage for the arm to pass through, the hook will rest in the withy.

It may seem strange at first to do it this way up, as it would at first impression appear to be much sturdier to hook the protruding side limb over the suspension bar and use the hook you have cut



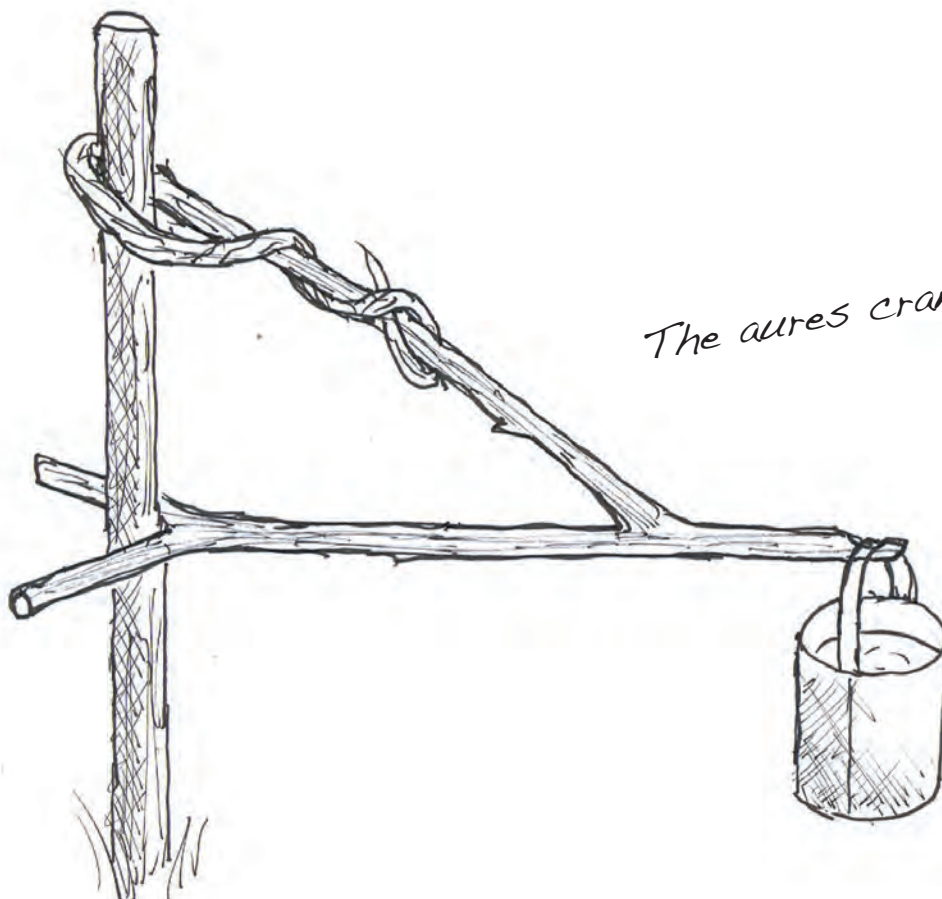
Badly designed pot hangers



on the bail arm... Although perfectly reasonable at first, you would then have no control over temperature and would not be able to move the pot up or down without the end of the pot hanger going in your food! Doing it this way you can slide the pot hanger up or down, resting the cordage/withy in one of the various hooks you have created.

This is my favourite long term campfire cooking set up by far, but there are many different options available to you. One crane that we use on smaller fires is the Aures Crane, described in Ellsworth Jaeger's book. It is a wonderfully simple and effective affair. Here you will need to select a sturdy pole to drive into the ground and a forked limb as shown in the diagram (hazel works well as it withies up nicely at the end). The beauty of this cooking system is that it is simple, efficient and you can swing it out of the way of the fire when it is not in use. It is important to cut notches at the end of the crane arm so that the bail arms of your pots have somewhere to sit to prevent the pots rotating and falling off as you swing the crane. The height and therefore temperature of the pot contents can be adjusted by releasing the tension briefly of the arm on the withy, although this is not as easy as the pot hangers from the suspension bar described above.

Perhaps the most well known cooking crane is the wagon stick, again featured in many different books through the years. Once again a vertical forked stick should be driven into the ground, distant enough from the fire so as not to burn. If you have to knock it into the ground it is good practice to chamfer the edges with your knife to prevent it splitting. As before, the suspension arm should be of sturdy construction. At the end which will take the pot, put a chisel point onto it and then make a small impression with your knife for the pot hanger. At the other end it will need to be anchored down with an inverted side limbed branch. Once again there are further adaptations possible to this to allow for the alteration of height.



The aures crane

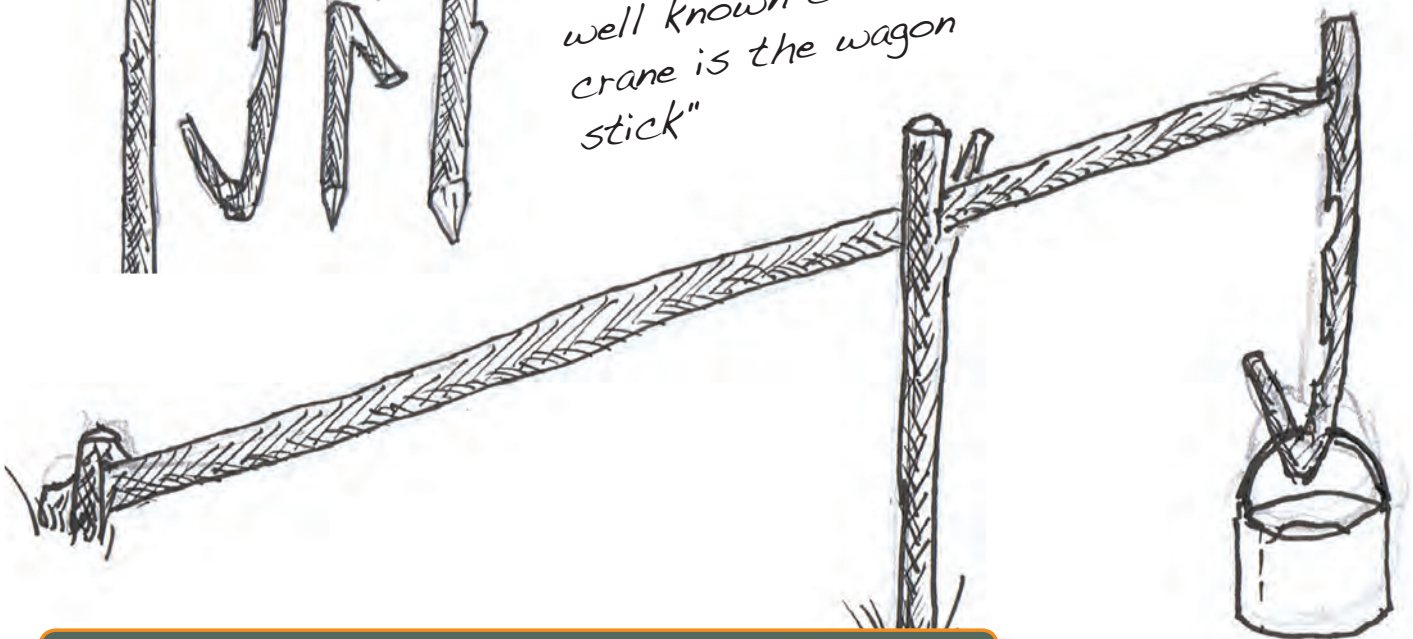


Make the pot hanger in the same manner as described above, although this time with one subtle difference. Instead of the remaining triangle of the cut notch pointing downwards, this one needs to be pointing upwards in order to receive the bail arm of your pot. It is important to make sure that the hooks created are again on the same side as the side limb, to ensure the best balance of your pot; otherwise you may well be accidentally dousing your fire with the contents!



The wagon stick

"Perhaps the most well known cooking crane is the wagon stick"



MY COOKING CRANE TICK LIST

- Is it fit for purpose (one night or permanent camp)?
- Multiple suspension or one pot cooking?
- Correct choice of materials in the construction (wood species, shape, strength)
- Can I adjust the temperature of the pot easily and safely by raising/lowering?
- Can I adjust the cooking by handling wood and not cooking pots/bail arms?
- Is the crane unobtrusive when not in use?
- Can I easily feed the fire or remove fuel/change the fire lay?

FINDING YOUR WAY

WITHOUT A MAP OR A COMPASS



Looking after yourself in the wilds, with minimal reliance on equipment and maximum reliance on your skills and knowledge of nature, includes being able to find your way without map or compass.

Proficient natural navigation involves a solid understanding of some of the most fundamental phenomena of the natural world which surrounds us.

Natural Navigation Clichés

Ask even a small group of people what they know about natural navigation and at least one will say "moss on trees!"

This is one of the clichés of natural navigation - part of popular knowledge, overused as an example, varying in accuracy and usefulness.

At its heart, natural navigation is based on observation and memory.

And it is true that in some instances moss does grow only on the north side of trees. In other instances it is false. I can show you plenty of trees where moss grows all the way around the trunk. There are clearly localised factors at play.

There are other commonly-known observations which relate to direction, such as the positioning of the nests of wood ants to the southeast of trees. While generally true that if located near a large tree, the nest will be somewhere on the southern side, local shade vs. sunlight is a significant factor in the exact positioning of a nest.

Understanding why is important. The ants are after the warmth of the Sun, particularly in the morning. The nests are positioned so that they maximise the nest's exposure.

Other insects which orientate their homes in relation to the Sun



Moss growing on only the north side of a tree. East Sussex.



Termite mounds in evening light. Queensland, Australia.

AUTHOR PROFILE:

Paul Kirtley, Frontier Bushcraft

Owner and Chief Instructor of Frontier Bushcraft Ltd. Paul, also a Mountain Leader was previously Course Director at Woodlore Ltd. He spent 10 years studying and training under the guidance of world-renowned bushcraft expert Ray Mears, first as a student on his courses, then as an employee. Paul is one of only a few people who have been recognised by Ray Mears as a bushcraft instructor, being awarded the celebrated antler-handled Woodlore instructor's knife.



are termites. This influences the shape of the nest so as to regulate the temperature of the nest. There is a larger surface area facing the sun in the morning and evening and a smaller surface area during the hottest part of the day.

Termite mounds thus prove to be very reliable indicators of direction as long as you understand the motion of the Sun. Other natural navigation indicators also relate to the effect of the Sun; for example, the shape of trees, the position or orientation of plants, or where frost persists on a winter's day, to name a few. Understand the motion of the Sun and your understanding of many other indicators will also snap into place.

Use of Heavenly Bodies for Navigation

For millennia, humans have been using the heavenly bodies as aids to our navigation.

In more recent times - the last 500 years or so - increased trade and exploration of the globe demanded more accurate navigation. As a result, more accurate measurements of the positions of heavenly bodies were made and celestial navigation became more mathematical.

This connection with maths puts many people off learning much about celestial navigation.

Even so, the fundamentals of using celestial objects for navigation are the same as they have ever been.



Observe Your Surroundings

The three brightest objects in the sky are the Sun, the Moon and Venus, respectively. If present above the horizon both the Moon and Venus are bright enough to be seen even during the day.

Once the Sun goes down, there are much more faint celestial bodies that are also useful, given that their motion - and therefore position in the sky - is relatively easy to predict or interpret.

You shouldn't be overwhelmed by any of this. The best way to build up knowledge of the night sky is gradually, over time. Just go out and take a look. Get to know the basic constellations. Look on consecutive nights and see if you can predict where something you saw is going to be again the next night. You'll find there is much regularity in what you observe.

Direction From The Sun

Before we get carried away, first things first.

The (apparent) motion of the Sun is by far and away the most useful to understand for the purposes of natural navigation. It's also a very regular - therefore predictable - motion to understand.

This understanding provides a globally relevant foundation in the ability to orient oneself. Yes, it will help interpret localised indicators such as termite mounds but wherever you travel, the ability to tell direction from the Sun extends in its usefulness far beyond the homes of ants in the northern pine forests or the territories of antipodean termites.

The natural navigator needs to understand the daily and annual motion of the Sun. The first relates to the fact that the Earth is rotating on its axis; the second relates to the fact that the Earth orbits the Sun.

Annual Motion and Seasonal Positioning of the Sun

Most of us have known the old adage that the Sun rises in the east and sets in the west for so long that we can't remember where we first heard it. In fact, this is where the linkage between the east - or "the orient" - and to orient oneself derives.

Somewhat like a stopped clock being correct twice a day, however, this old adage is only correct twice a year. Only on the days that are commonly known as the equinoxes - around 20 March and 23

September - does the Sun actually rise due east and set due west. The rest of the year the Sun sets and rises north or south of these points depending on your latitude. This is linked to the length of the day at your given latitude, with the Sun spending more time above the horizon as the days get longer.

Equally spaced between the equinoxes are the solstices, occurring around the 21 June and 21 December. The word solstice comes from the Latin Sol (meaning sun) and sistere (meaning to stand still). What does it mean for the Sun to "stand still"? At a given point on the surface of the Earth, as the days get longer with the Sun spending longer above the horizon each day, its maximum height above the horizon each day also increases. The maximum height above the horizon occurs at the summer solstice. The Sun's maximum daily elevation then decreases again until it reaches its annual minimum at the winter solstice. The Sun's maximum daily elevation then changes direction again, getting marginally higher each day. To change direction you need to stand still, even if it's just for a moment. That's the meaning of solstice and what happens to the Sun on the day it occurs.

From the December solstice onwards, the days become longer in the northern hemisphere and shorter in the south. This continues

until the solstice in June, after which days become shorter in the north and lengthen again in the southern hemisphere, until we again reach the December solstice. The converse of all of this is that as the days get longer, the nights get shorter and vice versa. At some stage the length of the night is equal to the length of the day. But only in passing.

The word equinox derives from the Latin meaning 'equal night' (the 'equi' part is fairly easy to work out and if you link 'nocturnal' to 'nox', you are unlikely to forget this either). It is so named because around the time of the equinox the length of the day is around the same length as the night.

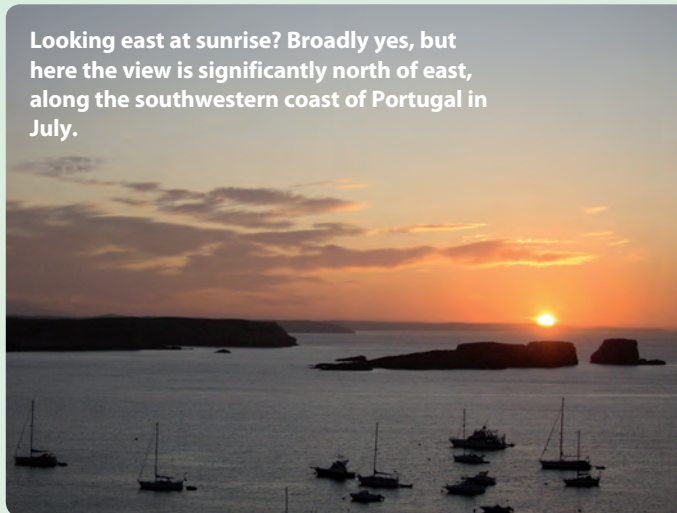
You probably remember, from school or elsewhere, that the lengthening or shortening days (and the seasons) are due to the Earth's axis being tilted. The equinox itself happens when the Earth's axis is tilted neither toward nor away from the Sun. Another way of putting this is that the equator is in the same plane

as that in which the Earth orbits (the ecliptic).

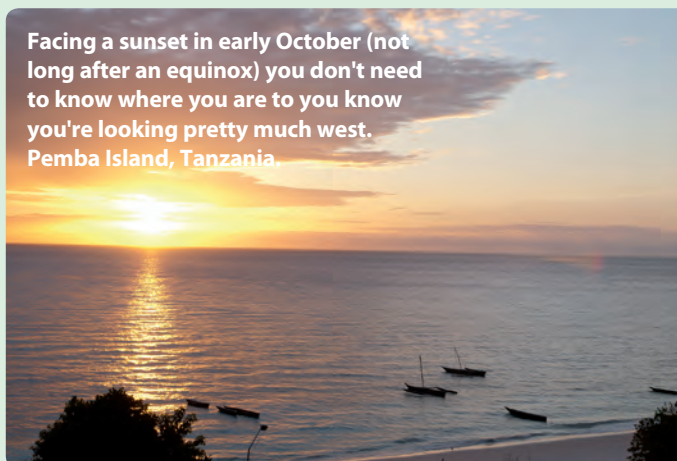
Daily Motion of the Sun

We know the Sun rises in eastern part of the sky and tracks west during the day, setting somewhere on the western horizon. As

Looking east at sunrise? Broadly yes, but here the view is significantly north of east, along the southwestern coast of Portugal in July.



Facing a sunset in early October (not long after an equinox) you don't need to know where you are to you know you're looking pretty much west. Pemba Island, Tanzania.



the Sun tracks west, shadows track east. We can use this to our advantage with the simple and classic sun stick.

Simply place a stick in the ground, mark the end of the shadow and wait a while - maybe 30 minutes. Mark the end of the shadow a second time. Since the shadow will have tracked from west to east, the line between your markers will be an approximate east-west line. Once you have your east-west line, you can draw a line at right angles to give a north-south line.

With a longer wait, the line becomes a better approximation and this technique can provide a pretty accurate result.

Understanding Local Noon

These days we tend to think of noon as 12:00 on our watches. While this might be true in some places, the clock time showing on your watch at local noon - or solar noon - varies depending on your exact location.

From the perspective of navigation, it's useful to think of local noon in two ways.

First, local noon is defined as the time at which the Sun crosses your meridian. So, it's specific to your longitude - how far east or west you are. Picture a globe with lines of longitude running north-south. These are meridians. From your perspective, at the point the Sun crosses your meridian it is at the highest point above the horizon for that day. Before local noon the Sun is rising and after local noon it is falling. Local noon is also when your shadow will be shortest. Before noon the point on the Earth's surface you are on is rotating towards the Sun and your shadow gets shorter; after noon you are rotating away and your shadow gets longer.

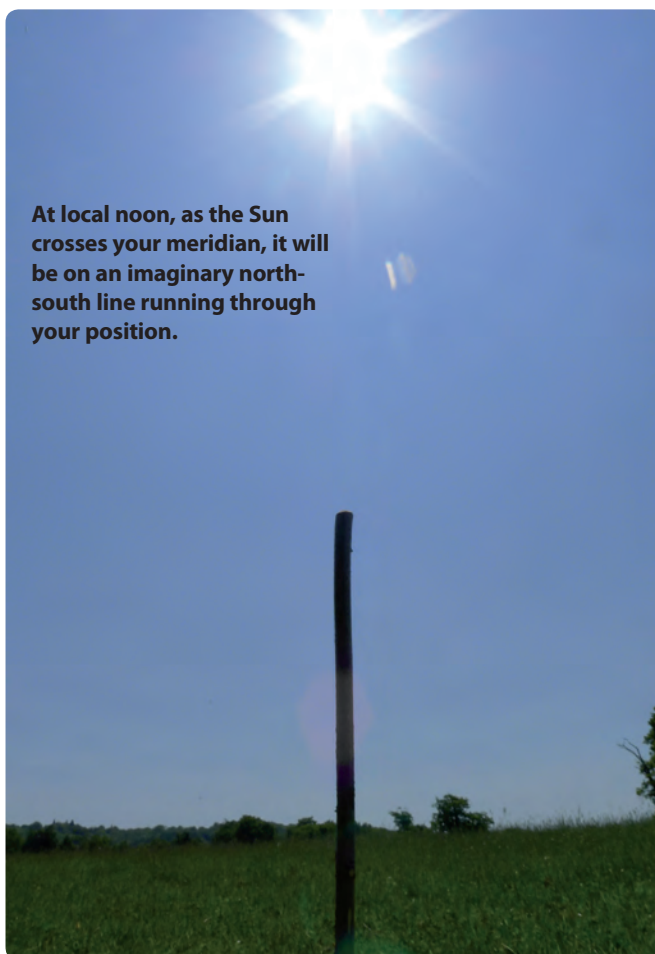
Second, since local noon is defined as the time at which the Sun



Two markers, 30 minutes apart give an approximate east-west line.



A third marker was placed at 15:10, 3 hours 15 minutes after a first, giving a more accurate east-west line.



At local noon, as the Sun crosses your meridian, it will be on an imaginary north-south line running through your position.

crosses your meridian, when it does so, it will be over an imaginary north-south line running under your feet. So, at local noon, the position of the Sun provides an accurate indicator of south/north.

Isn't The Sun Directly Overhead At Noon?

The Sun is only overhead at noon at particular places and on particular days of the year. For example, on the days of equinox, the Sun is directly overhead at noon on the equator. This is because the equatorial plane and the orbital plane coincide on these days.

On the days of the equinox, wherever you are, the height of the Sun at local noon will be equal to 90 degrees minus your latitude. So, if you are on the equator (zero latitude), the Sun will be overhead at noon.

If the Sun is overhead at noon on the equator only at particular days of the year, it must be overhead at noon at other neighbouring latitudes on neighbouring days. There is a limit, however, to how far north or south you can go and ever have the Sun overhead at noon - these limits are the Tropic of Cancer and the Tropic of Capricorn. The latitude of these circles (23.4378 degrees north and south respectively) corresponds to the tilt of the Earth's axis away from the plane on which it orbits. The area between them describes a zone where the Sun reaches a point directly overhead at least once per year. This area is known as the Tropics.

In areas north of the Tropic of Cancer - which includes the UK - the Sun will always be south of directly overhead, even at noon (when it will be directly south). South of the Tropic of Capricorn, the Sun will always be north of directly overhead, even at noon (when it will be directly north).

Three Norths!

Remember that we have to make sure we are thinking about the correct north. As navigators there are in fact three norths we have to juggle. When using maps and

compasses, we are primarily interested in the relationship between the grid north of our map and the magnetic north of our compass. Geographic north, or true north, doesn't come into it.

It's worth bearing in mind that natural navigation cues, particularly those that relate to the relative motion of the Earth to other celestial objects, relate to true north.

You can still use natural navigation cues in conjunction with your map-and-compass navigation. Indeed it makes you a much better navigator to do so as you have more tools in your toolbox and typically more information to help keep you oriented. You just need to know the relationship between the three norths in the locality you are operating. This information can usually be found in the key of your map. If not, you can actually work it out through observation, but an explanation of this will have to wait for another article...

You can also use your compass to check the accuracy of your natural navigation when you are learning or training. Again, you just need to know the relationship between magnetic north and true north in the locality.

I took the photos of the sun stick in East Sussex and I know that magnetic north is currently only 1 degree west of true north. I lined my compass up the best I could on the imaginary east-west line. The north needle of my compass was pointing 2 degrees west of where true north was indicated by my east-west line. That's not bad at all - only one degree out.

Remember the sun stick method applied in this way is only approximate. This is because the length of the shadow will also be changing as the height of the Sun above the horizon varies. Only if you placed your first marker a given amount of time before local noon and your second marker an equal length of time after local noon would you get an exact east-west line over a relatively short period of time.

If you don't have a watch, or you don't know the clock time of local noon, then this symmetry around local noon can be achieved in a different way. In the morning, draw a circle around your sun stick (a piece of string fixed to the stick can be used to measure the radius). Size the circle so that the end of the shadow is falling a little way outside of the circle. As the Sun rises higher in the sky, the shadow will shorten as well as moving east to west. Mark where the end of the shadow crosses the circle. Later mark where the end of the shadow crosses back outside the circle again as the shadow lengthens. The line between the two points will be an exact east-west line. If you do have a watch and you record the times the shadow crosses the circle, you'll also be able to work out the time

of local noon - it will be the time exactly half way between the two times you recorded.

A Problem of Time

The general sun stick method is pretty good and as the above example shows, with a longer wait it becomes very accurate. Done properly, the circle and shadow-stick method is more accurate still. But the problem with all of this is that it requires you to stay in one place for a period of time. Even the less accurate sun stick example

above required a wait of 30 minutes. It's possible you need to be on the move; you are navigating after all. There is an answer though.

The Earth rotates once per day. This is the definition of a day. So, due to the rotation of the Earth, the Sun apparently moves through 360 degrees over a 24 hour period. That is an average of 15 degrees per hour.

Once you know the time of local noon, you can work out direction from the Sun at any time of the day as long as you have a watch. You don't even need an analogue watch. If local noon is 12:09 and the time is currently 10:09, the Sun will be approximately 30 degrees east of south or on a bearing of 150 degrees.

As discussed above, throughout the year, the days get longer then shorter again. As the days get longer, the Sun spends more time above the horizon (this is why the days are longer!). In

the northern hemisphere this means that the Sun rises a little bit further north each morning and sets a little bit further north each evening. Just as on the day of the equinox - when the Sun rises in the east and sets in the west - the bearings at which the Sun rises and sets on any given day are pretty much symmetrical - so if the Sun rises 5 degrees north of east, it will set 5 degrees north of west; if it rises 10 degrees north of east, it will set 10 degrees north of west.

So, if we've observed sunset one day, we can work out the time of sunrise the next day as well as the direction from which the Sun will rise. For example if we know local noon is at 13:02 and have observed sunset at 20:51 (7 hours and 49 minutes after local noon), then we should expect to see the Sun rising at around 05:13 (7 hours and 49 minutes before local noon). Strictly speaking you should also make a small adjustment for the length of day changing. You should also consider the horizons you can see at sunset and sunrise - higher or lower ground will alter the timings. You won't be far off though with this simple calculation based on observation.



If you've observed the direction of the Sun and time at sunrise, you can again use the 15 degrees-per-hour average movement to give you an accurate indication of direction at any time of the day. For example if the Sun rose at 05:15 at 063 degrees, and the time is now 10:15 (5 hours later), the Sun will have moved around 75 degrees since sunrise and will be at approximately 138 degrees. Note that this also fits with the Sun being at 180 degrees (i.e. south) at local noon, a little less than 3 hours later at 13:02.

Direction From The Moon

While the Babylonians are thought to have been the first civilisation to keep extensive records of the Moon and its phases, it took astronomers and mathematicians a long time to understand and accurately model the motion of the Moon.

We don't need to have the mathematical genius of Newton, however, to make use of the Moon for natural navigation. We need one simple observation: The illuminated part of the Moon is reflecting light emanating from the Sun. And we understand the motion of the Sun, particularly on a daily basis. Telling direction from the Moon flows from being able to tell direction from the Sun.

Even if the Sun is below the horizon, the Moon will give away its position.

For example, a full Moon has to be opposite the Sun. That is to say if you are facing a full Moon, the Sun is behind you. We can go further too, based on just the knowledge of the Sun's motion in this article. Just as the Sun is directly south at local noon, so will a full Moon be south at local midnight.

A new or waxing crescent Moon is always going to appear to be in the sky not far behind the Sun, travelling east to west. The illuminated sliver of Moon will of course be facing the Sun. Similarly an old or waning crescent Moon will be visible not long before sunrise, appearing just ahead of the Sun. If you draw an imaginary line across the horns of a crescent Moon and extend the line to the horizon, it will give you an indication of a south (in the northern hemisphere).

Direction From The Stars

There is a rich history of humans navigating by the stars, from the Polynesians to many a more modern mariner, right up until the widespread adoption of GPS. Much of this was based on extensive observation and record keeping of one form or another, whether by oral traditions of native peoples, or the meticulous records of English astronomer John Flamsteed.

Before this puts you off, let me offer another simple observation - the Sun is a star. Admittedly it is a star with which we have a special relationship as we orbit around it. But the reason the Sun rises, moves across the sky and sets again is because the Earth is rotating, not because we are on one of its satellites.

So it is with other stars - if they appear to be rising, then we are

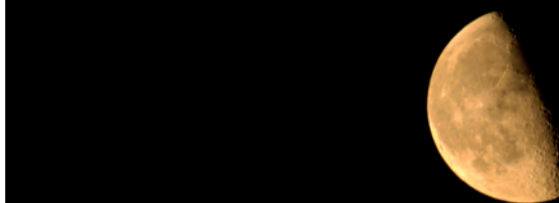
Observing the direction and time of sunset will allow you to calculate the direction and time of sunrise or vice versa. East Sussex.



looking eastward; if they appear to be setting, then we are looking westward. They also track across the sky in a similar manner to the Sun. So, if we are in the northern hemisphere and we see stars moving from left to right, then we are facing southwards.

If we can recognise particular stars or groupings of stars, then we can use this recognition, combined with some basic observation to help provide more information. One of the stars of the constellation Orion lies on the celestial equator. What this means is

The observation that the light reflected by the illuminated part of the Moon comes from the Sun is of great use to the natural navigator.



that it always rises in the east and sets in the west.

The star most celebrated by natural navigators in the northern hemisphere is Polaris, the north star, which appears stationary in the night sky as everything else rotates around it. This is because Polaris is pretty much on the Earth's axis of rotation. Once you have found Polaris, which isn't a particularly bright star, extend a line down to the horizon, meeting it at right angles. This gives true north. To find Polaris, one typically uses an asterism which forms part of the constellation Ursa Major, commonly known as The Plough or The Big Dipper. Two of the stars - Dubhe and Merak - commonly known as "the pointers", point towards Polaris.

Other Indicators In The Night Sky

Native peoples of the north long observed that Aurora Borealis or the Northern Lights indicated direction, aligning in an east-west band or curtain across the sky. Science has also observed that distinct aurora tend to be aligned in an east-west direction. The scientific explanation of this is that auroras are motivated by a specific class of magnetic field-aligned currents known as Birkeland currents.

Use Everything You Can

As you can see in the above photo there are several natural cues all corroborating. Polaris gives a clear indication of north and the band of aurora cuts across the sky on an east-west alignment. Whenever you are navigating and whichever means you are using, you should always use multiple directional indicators. If things contradict each other, then this is the time to be checking everything. If you rely on only one directional cue, then you are more likely to make a mistake. Moreover, when you are learning, it's always good to double-check to make sure you have understood properly, made your observations or calculations accurately and applied the technique correctly.

Above all, natural navigation should enrich your understanding of and enjoyment of the natural world around you, whilst also keeping you on track.

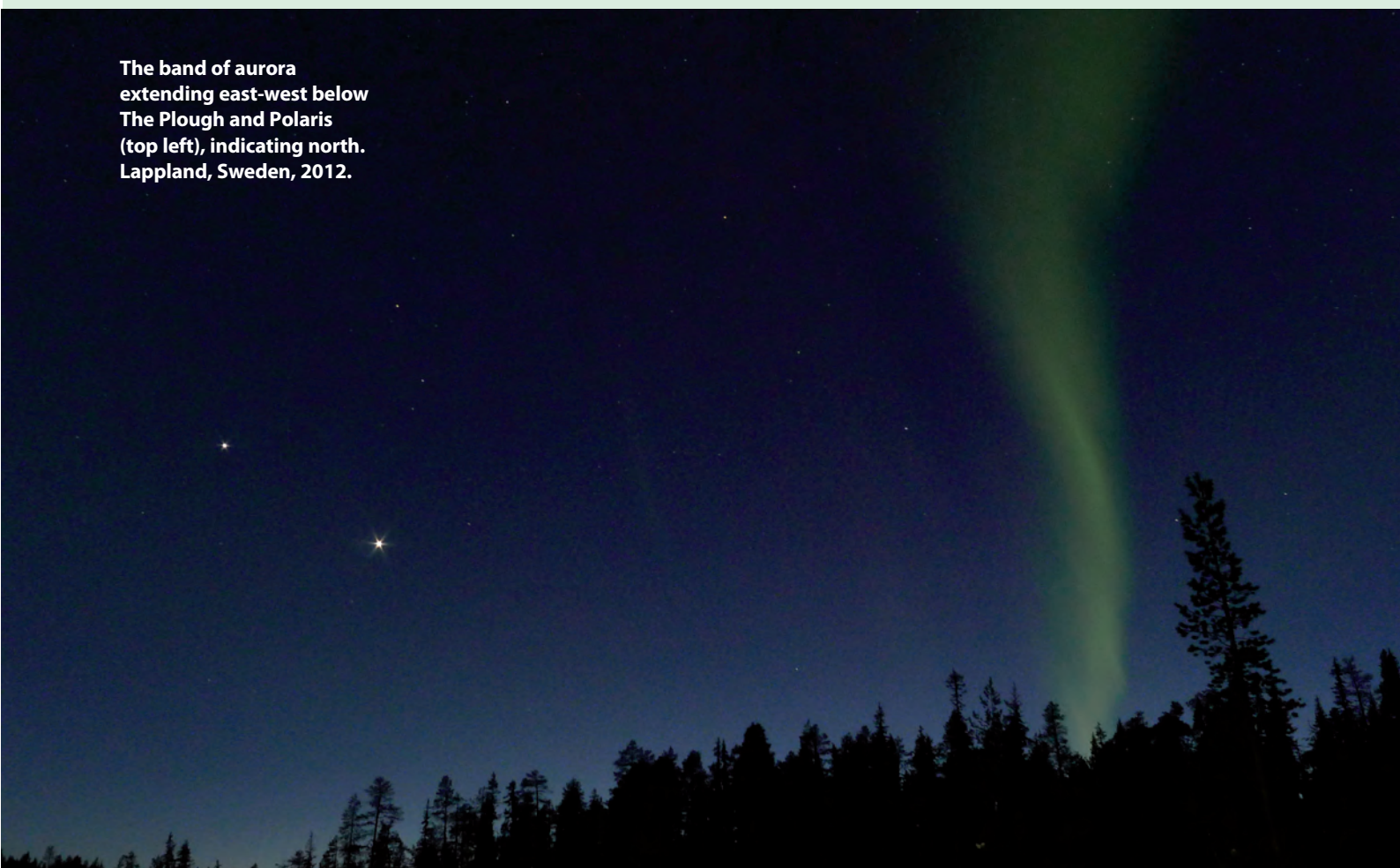
The illuminated part of this new crescent Moon gives away the position of the Sun; a line across the horns extended downwards towards the horizon indicates south. County Durham.



The highly-recognisable constellation Orion rises in the east. Lapland, Sweden.



The band of aurora extending east-west below The Plough and Polaris (top left), indicating north. Lapland, Sweden, 2012.



KNIVES FROM AROUND THE WORLD

AUTHORS

Ben & Lois Orford



Whatever walk of life you are from or occupation you are in, almost every day you will use a knife, whether it's the simple action of cutting string or opening the mail, to slicing bread or preparing food. From as far back as the first stone and bone tools that man made to help prepare food and gather materials, the blade and the knife have been fundamental tools of the human race. Even though in recent years the knife has sometimes been transformed into a less practical art piece made from highly prized materials, the general idea and design have stayed the same and can never really evolve far from the original concept.

Early stone tools would have differed around the world due to the materials locally available, such as flint here in the UK and the incredibly sharp obsidian in the US. Even today, the knife designs we have are heavily based on the traditional designs that have evolved in different countries, using local materials and catering to regional requirements.

Understanding the reasons behind these variations will in turn help you to understand the mechanics of a knife and to choose the correct style and shape most relevant to Bushcraft. The majority of the knives have fixed blades typically associated with woodcraft but there are also some folding knives.

France

In France the classic commoners' pocket knives, such as the Opinel, Laguiole and Nontron, were the essential tool of every man and woman working the land and tending animals. The strong rural roots of the design evolved from the local materials to hand, the ample amount of beech and box trees and horn for the handles and simple carbon steel blades from the large quantities of iron ore found in the country.



The remit for these knives was that they are small and easy to carry, have a sharp thin blade geometry to allow them to perform well whittling a stick and cutting food for your lunch, as well as tending to the farm's livestock. The traditional high carbon steel blade is very easy to sharpen and holds a very sharp edge. Compared to modern stainless steels such as 440C, traditional knives are a little harder to sharpen, but do not rust so readily or taint your food. These French blades have a flat tapered shape from the back edge to the cutting edge with a small secondary bevel which make it very easy to slice through material as there is little drag on the blade. The secondary bevel means that it is very easy to sharpen in the field even if you only have a smooth stone from the ground to sharpen it with.

The Opinel and folding Nontron have a simple twist lock on the handle making the folding blade very solid, where as the Laguiole has only a simple slip joint lock which is not so secure for heavier tasks. The Opinel is the classic French pocket knife, it is very versatile, very robust and is very inexpensive and has long been the choice of many people all over the world for the everyday carried pocket knife. A little care needs to be taken as it is still classed as a lock knife here in the UK, so is not a legal carry knife, but is a great back up knife to a bigger fixed blade.

Sweden, Norway and Finland

All traditional knives from Scandinavia have a very strong theme running through their design. Almost all of them comprise of a stick tang design where the long thin tang of the knife goes all the way through the handle, which is often made from multiple stacked materials. The designs use materials which are readily available in that area, which usually means Reindeer or Moose antler, highly figured curly or Massur birch and leather.

These knives are quite often made by two individual crafts people - the blacksmith who makes the blade and the knife maker who assembles the handle and makes the sheath. The blades are quite often forged and laminated, this means that a piece of very high carbon steel is sandwiched between softer outer pieces of steel and forge welded together to create a laminate of hard and soft steel. This allows the blades to be left harder as the softer outer

parts prevent them breaking and also makes sharpening them easier. The fact that these knives and sheaths were often made by the nomadic herdsman while they were out with the herds, means that the manufacture of them is possible with just the use of hand tools. The handles and sheaths which are often both made of antler are usually decorated with elaborate engravings, making intricate patterns. This carving was a form of entertainment in the long dark winter nights.

Some traditional sheaths use leather produced from the Reindeer which is much thinner than the Cow hide often used in other countries. This leather is tanned in a different way to produce a half-tan leather which gives it a soft tanned outside and a hard, almost rawhide middle. This laminate prevents the sharp blade cutting through the thin material, which is very particular to Scandinavian knives.

They often have a leather upper section and a wooden or antler bottom into which the blade sits well protected. These have a pronounced curve to the end to allow the knife to be drawn even when the hands are very cold or when wearing mitts.

Some of the modern factory-made knives in this style are made such as Helle and Brusletto from Norway and Frosts from Sweden, who produce many styles of knife with modern interpretations including plastic handles, but which are still based on the traditional styles. This style of knife is very relevant to woodcraft and bushcraft as the flat grind, or Scandi grind, that is on most blades is very easy to sharpen and is very well suited to fine woodcarving and craft work and it is just as well suited for food prep, skinning and all other duties around camp. Although the stacked handle construct doesn't make such a strong knife for heavy work or splitting tasks, it does make it a lot lighter for continued use during wood carving.

America

The US is one of the largest producers of knives and has some of the biggest names such as Buck, Case, Randall and custom makers such as Bob Dozier, Dan Crotts, Chris Reeve, Tom Krein and Tony Bose, to name a mere fraction.



The USA still leads the way in knife making and has a strong custom of merging many traditions from all over the world, influenced by the diverse range of people from different countries migrating to the US over the last few centuries.

Because of this variety of nationalities the styles of knives found here are very diverse with a fusion of techniques and styles. These designs often originate in the US but then as the style becomes popular, they are often copied and then made all over the world by various knife making companies. We will look at three of the common designs found in the US.

The hunting style knife

The most common knife designs from the US are typical hunting style knives and general purpose knives. These are normally made from a solid piece of steel, from simple carbon tool steel to modern high performance stainless steels, which have been specifically designed for the knife making industry. This solid full tang construction is very robust and allows thin slabs of various materials to be attached to the side of the tang making a very ergonomic and strong handle. These knives can often be very large with long blades for big game, but anything up to about five inches in length is more suited to our bushcraft needs.

The combination of a high quality stainless steel and modern synthetic handle materials, such as G10 and Micarta, and modern Kydex sheaths make a very robust, low maintenance, hygienic knife for the hunter as it can be washed after use with no fear of handle

movement or staining of the blade. The grinds tend to be either flat or hollow ground to remove excess material from thickness of the blade and then finished with a more acute secondary bevel. This grind gives the knife a thin edge geometry, even if it is made from thick material and the secondary bevel is strong, quick to sharpen and is a more general purpose edge. This secondary bevel is a little harder to feel when placed on a sharpening stone compared to the

Scandi grind but the advantage is, if it does get dull, chipped or damaged then removing the chip is much quicker due to the small amount of steel needing to be removed. This secondary bevel does make the knife less suited for woodcraft and carving as the small narrow bevel is less responsive when whittling and is not as controllable as the more typical Scandi grind we look for in a woodcraft knife, but it certainly has its place in food prep and field dressing game.

The tactical survival knife.

This is still a very popular design in the US and has now spread all over the world, the fundamental idea being that if you are out in a survival situation then one knife can get you out of a lot of trouble by having lots of different functions all in one tool. These are often big knives normally no smaller than

a six inch blade which is great for heavy chopping and digging. They still have a hollow or flat grind with secondary bevels, often with a section of serrated or toothed edge for aggressive and heavy cutting through rope or seat belts etc. The blade section and grind is often fairly obtuse and thick to give the blade lots of strength for chopping and digging, even allowing puncturing through steel without the edge taking too much of a battering. This does limit the ability for any fine work and craft use but is primarily designed for 'worst case' scenarios.



Quite often you will find extra features on the knives from saw edges, hollow handles and lashing points to make it into a spear, wire cutters and heavy pommels for hammering and smashing through windows. They certainly have a place in a more military and emergency style scenario, but as a general knife for our needs as a bushcrafter, these tend to be oversized and do too many jobs not too well, rather than one job really well. The serrated edges are great when new but often require a particular sharpening file to be able to keep them sharp.

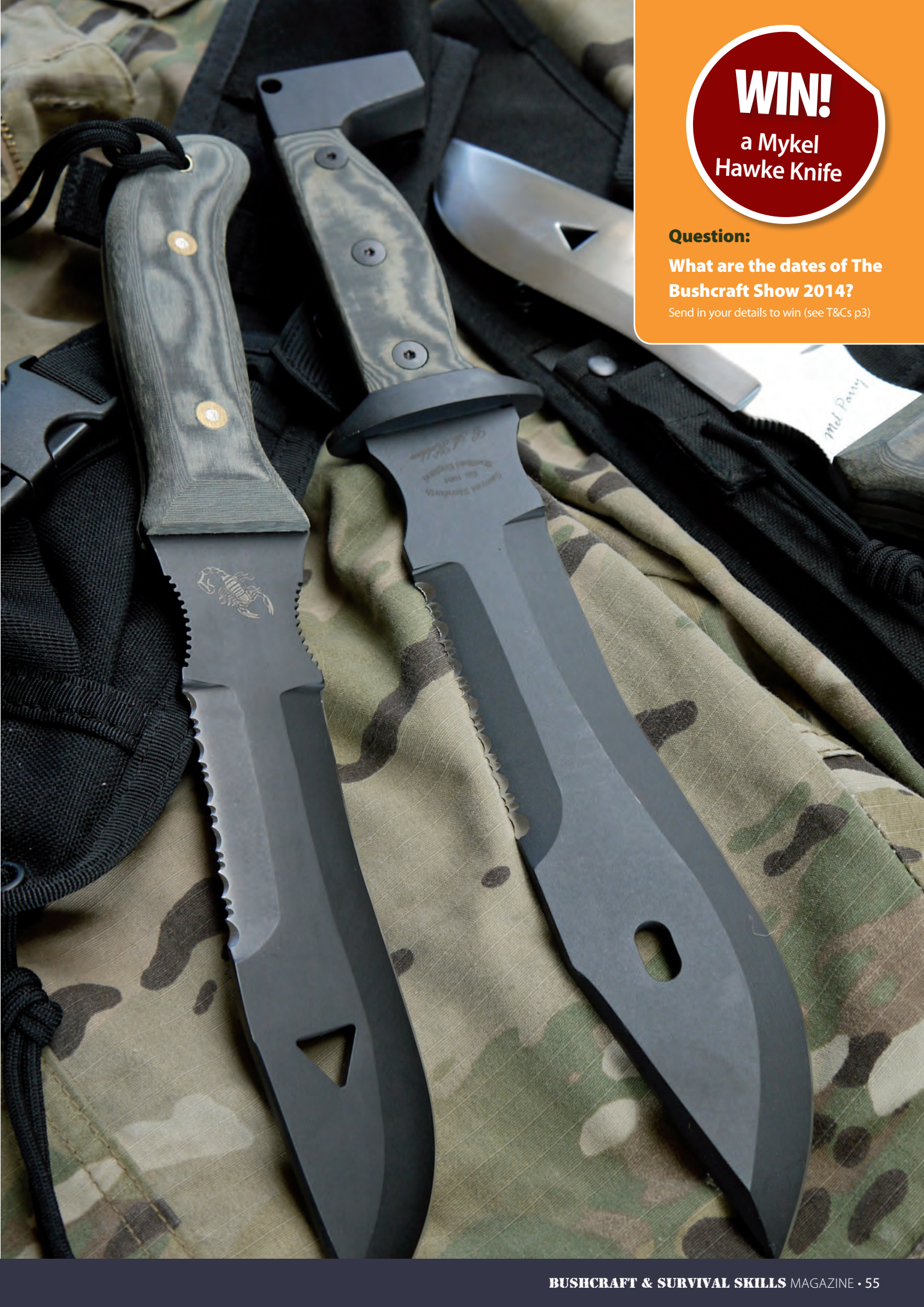
Most often it would better to go for a smaller fixed blade for all heavy cutting accompanied by a multi-tool, which we will look at next.

Multi tools

Leatherman have paved the way in the new generation of the folding multi tools, getting away from the classic Swiss Army knife which was the first

multi tool and has many applications still. The addition of a pair of pliers to the tool gave Leatherman a great advantage over just simple fold out screwdrivers etc.

The multi tool idea is now popular with many makers and there is a vast range to choose from varying in quality, so watch out for the very cheap versions, as they may let you down.



WIN!
a Mykel
Hawke Knife

Question:

**What are the dates of The
Bushcraft Show 2014?**

Send in your details to win (see T&Cs p3)

These tools are relatively heavy and often too big for your pocket but usually come with a good belt sheath to hold it and if you are out on a trip there aren't many jobs this handy tool can't deal with. Some just have a few extra tools included, but you will usually get at least two folding blades, one serrated and one general purpose, a file, saw, screwdrivers of all sorts, additional screw driver heads and also scissors, bottle openers and tin openers. It is a great bit of kit to have on your belt or certainly in your rucksack on a trip.

Asia

Probably the most famous knife design is the Kukri knife from Nepal, used for work as well as a fighting knife. It has an unusual shape with an inwardly curved edge, which is instantly recognisable around the world and is the symbol of the Gurkhas. The shape makes it very effective at slicing and heavy chopping as the very pronounced curve to the blade aids the slicing effect of the edge. The blade length is anything from 10 to 14 inches so it's not really designed for close craft work but more for chopping and slicing through vegetation.

This knife is often made from reclaimed carbon spring steel from leaf springs on scrap vehicles for the more practical working models, but is also made from very high quality materials for the ceremonial or presentation versions. The handle is usually made from the local wood or buffalo horn and has a very large pommel on the end to prevent the knife slipping from your grasp when chopping. The sheath is made from wood with a thin leather covering and often comes with two smaller blades in the sheath, one for smaller tasks and food prep and one which is used as a sharpening steel.

The handle can be a little too small for the western grip and so this design is now being reproduced by many of the modern cutlery firms with a larger composite handle for more comfort and better use in the survival and travel market. The Kukri is a good choice if you are looking for a large tool equivalent to a Parang or Machete, but is not suited to small more detailed work.

Japan

Japan has long been (and still is), the home of the quality knife and woodworking tool. The strong cultural heritage of forging



top quality tools based on the Samurai sword-making tradition is world renowned. The knives that are now being produced in Japan still have traditional roots and often use materials and designs with centuries of history.

The blades are usually made from laminating two or more steels; this gives the advantage of being able to have a very hard cutting edge strengthened by the softer outer layer of steel, which increases toughness. This also makes it a lot easier to sharpen as there is less hard steel to remove. The main difference in the Japanese tool-making tradition is that the tools are very specific to each task; each edge is designed to perform extremely well for that one task but may not be well suited to another.

A lot of the knives, especially for the use in the kitchen, are often single beveled so they cut very effectively, but this means they are very particular to certain tasks and handed so do not have universal edge geometry. The edges on many of the knives produced are thin and hard, which means they are incredibly sharp and cut very well. They are not suited to the rigours of bushcraft where there is often the need for lateral movement for splitting material etc. which would risk chipping or breaking the edge.

The most common Japanese knives on the market are the kitchen knives, although you may find a few traditional pocket or hunting knives which have the same traditional steel and edge designs but are more suited to bushcraft.

These knives are a dream to use in the kitchen and great for food preparation, but if you are after a more robust, maintenance-free knife, then these may not be the best choice.

These are only a few of the countries that have a strong tradition in knife making but hopefully this overview will go some way in giving you a better idea of what knife will be best for you.



Heinnie.com
Premium Source for the Hardest Kit on the Planet

**FLASHLIGHTS - POCKET TOOLS - KNIVES - BAGS - CLOTHING
OPTICS - PENS - WATCHES - EYEWEAR - SURVIVAL EQUIPMENT**

Helikon-Tex Patriot Heavy Fleece Jacket

At 390g Double Superfine the Patriot heavy fleece jacket provides a warm, comfortable and sturdy jacket. It has a high collar with integrated hood, reinforced sleeves and quality YKK zips throughout. Hard wearing, water-resistant it is the ideal all-season jacket, in warmer weather as an outer garment, and in a cooler environment as a warming under a jacket.

- Ventilated sleeves with underarm pit zipper
- Drawstring waistband with cord lock
- Double Superfine Fleece 390g/m²
- 1 large pocket on the lower back
- Velcro panels on each arm
- Material: 100% Polyester
- Adjustable Velcro cuffs
- High collar with hood
- 2 chest pockets
- 3 sleeve pockets
- YKK Zips



HELIKON
ACTION GEAR

Heinnie Price £49.95

Exotac Polystriker XL

Tough firestriker featuring the innovative tungsten carbide striker design.

- Burns at nearly 5500 degF (3000 C)
- Ferrocerium rod works when wet
- Durable, ultra lightweight polymer design
- Ultra-sharp tungsten carbide striking tool
- Snap-in striking tool

Heinnie Price £15.95



Exotac Candle Tin Large

The candle TIN™ offers the most versatile natural wax candle on the market. With three wicks in each candle, two different wick burn rates, and two tin sizes, these candles can be a source of light or a powerhouse of heat.

Heinnie Price £6.95

Exotac Matchcap XL



The MATCHCAP XL is the culmination of countless trips into the woods and a few fire-related mishaps. They have doubled the capacity and increased the striking surface by 250%. Can also be used to store water purification tablets, tinder, medicine, fishing hooks, first aid kit, etc.

Heinnie Price £23.95

SOG Mini Sharpener/Firestriker

The SOG Mini Sharpener is constructed from reinforced nylon, and includes a magnesium fire starting rod, ceramic rod for sharpening serrated edges, and a diamond sharpening pad. All in a compact design that's easy to take anywhere!

Heinnie Price £15.95



SOG
Creators of Extraordinary Tools & Blades

Maxpedition Jumbo Versipack

The Jumbo Versipack is Maxpedition's most successful and sought after tactical shoulder bag. It is tough, spacious and available in a large variety of colour variations.

Heinnie Price £88.95



Nitecore Tiny Monster TM26

Be prepared to be awe struck by the amazing power that is the TM26. Incorporating four Cree XML LEDs it is capable of an unbelievable 3500 lumens. It also features an OLED display showing current battery life and runtime plus module temperature, voltage and lumen measurement.

NITECORE



**3500
Lumens**

Heinnie Price £291.95

Fällkniven Kolt Knife

The KK knife (Kolt Knife) is a traditionally designed knife where the clean lines dominate the blade, the handle and the sheath. By offering a safe, comfortable handle, and a very strong blade with an extremely sharp edge, the non-aggressive design provides a knife which should fit any hand, and any task.

Heinnie Price £108.95



FÄLLKNIVEN
QUALITY KNIVES
SWEDEN



IMPORTANT: HEINNIE HAYNES WILL NOT SELL A KNIFE TO ANYONE UNDER 18 YEARS OF AGE

©2012 HEINNIE HAYNES, Unit 4/5 Windmill Industrial Estate, Wimborne Road, Barry, CF63 3DH

0900 - 1800 Mon - Fri
0900 - 1300 Sat



033 0300 0400

SUN, SUN, FUN... AT THE BUSHCRAFT SHOW

In the days before The Bushcraft Show 2013 kicked off, as we set up the site, the wind blew, it rained one moment and the sun would come out the next and just when you removed your jacket, it would hail! The weather was just not sure what it wanted to do, or perhaps it was just getting it out if its system before the show began.

Day 1 – Saturday 25th May 2013

Early Saturday morning, the birds began to sing and soared in the big blue clear skies, no one could have asked for a better day. Campers awoke bright and early as the smell of bacon cooking over an open fire drifted through the crisp fresh morning air, simply the best alarm call!

Visitors and traders were hopeful of good weather, but no one expected that we would have three glorious days of sunshine for the entire show! Not only was the weather fabulous for the visitors to the show, but also for our special guests from Kenya, the Oloip Maasai Dance Group. We wanted them to be comfortable and enjoy the show and the warm sunny weather was the icing on the cake, allowing them to wear their traditional costume without the need for borrowed coats, hats and gloves!

Traders bustled with excitement as the final items adorned their wonderful stands with the show about to commence. And so it did! With over nine thousand visitors throughout the weekend travelling from all over the UK, Ireland and beyond, including the USA, Sweden, Norway, Australia, Brazil and Kenya, the event truly captured the nomadic spirit of like-minded people getting together to enjoy bushcraft. Everyone, including award-winning companies and manufacturers from across the world, came ready to teach, entertain and share their expertise and advice.

Survival Legend and author of worldwide bestseller *The SAS Survival Handbook*, John 'Lofty' Wiseman made a rare appearance on Saturday to share his lifesaving skills and answer questions. On arrival, Lofty walked around the show, meeting visitors and exhibitors on route. His talk was enlightening, humorous, and, as always, educational. You will be able to watch him on our show video due for release soon. 'Lofty' expressed his praise; having thoroughly enjoyed the show once again and wants to come back in 2014.

And that's just the start of it, as there was so much to do at The

Bushcraft Show 2013. From woodland crafts, archery, canoeing and axe forging, to tracking, whittling, grass rope making, weaving and more. Each skill was taught by an expert, who enlightened each visitor's experience. As for kit, there was an array of exhibitors with quality gear and crafts to admire and buy. As knowledge increased, friendships developed, some new kit was purchased and visitors mingled with some of the world's best bushcraft and survival skills experts, we just knew that people were having a good time at The Bushcraft Show 2013.

The evening was enjoyed sitting under the stars with a communal campfire, listening to the sounds of African Drumming from Sabar Soundsystem. There was the opportunity to see and hear the UK's pioneer of the open canoe, Ray Goodwin, as he shared his personal accounts of inspirational canoe trips in the UK and North America, including the use of bushcraft on his wilderness journeys at The Bushcraft Show.

The evening ended with an inspirational Star Lore talk by Ben McNutt of Woodsmoke, which visitors agreed was an amazing experience.

Day 2 – Sunday 26th May 2013

Day two and the sun was still shining! Today's special guest appearances were Mykel Hawke and Ruth England, Co-Stars of Discovery Channel's *Man, Woman, Wild*. They spoke on the main stage, sharing images, stories and survival tips they had gathered on the way.

The day was filled with more bushcraft and survival activities from paddling on the lake to expert tuition on navigation, knife and axe skills and



firelighting. Those fancying some fun tried their axe throwing skills, dancing with the Massai warriors or interacting with falcons, owls, vultures and hawks.

Trade stands were still hustling and bustling at 6pm; no-one seemed to want to close their stand as visitors were still mingling and just enjoying their visit to The Bushcraft Show.

One of the highlights of the evening was the charity auction to raise funds for the Massai visitors and a school in a Kenyan village. Ian Nairn did a brilliant job as auctioneer and his efforts contributed to make the evening entertaining and both a fun and an emotional experience. People bid generously and the auction raised a huge £3600. In the next issue of the magazine we will be reporting on the funds raised for the Massai and the difference it has made in their lives.

The relaxing sounds of Seamus McLoughlin's unique voice accompanied by his guitar, entertained weekend campers before they tucked themselves in for the night, ready for the last day of the show.

Day 3– Monday 27th May 2013

The last day of the show and it was still a sunny, busy, full day, filled with more good times but some reserved sadness as it was the last day of the show for another year.

There is simply nowhere else in the world that you could have such an enriching, educational and pleasurable experience from survival and bushcraft experts; learning from International Tracker Perry McGee – son of the late Eddie McGee or forging an axe with Rikard and Julia Kalthoff CEO of Wetterlings.



As visitors left the show, wonderful feedback was received and day and weekend visitors shared their comments and said they would definitely be back again next year.

We would like to thank our Sponsors, 1948 Original Equipment, Bear Grylls by Craghoppers, Bear Grylls Survival Academy, Bushcraft & Survival Skills Magazine, Nordic Outdoors, Wetterlings Swedish Axe Works and Woodland Ways for helping to make the show a great success.

The Bushcraft Show team would like to thank all the visitors for their efforts in following the leave-no-trace policy and for helping to give The Bushcraft Show a good name.





Gill Forester, Assistant Area Manager responsible for Elvaston Castle & Country Park said, "I never have to worry about the site after The Bushcraft Show as visitors and the event organisers have such a respect for the environment that it seems like they were never there. The show is great as it promotes woodland crafts and skills and responsible use of the countryside".

See you at The Bushcraft Show 2014!

New for The Bushcraft Show 2014

- Great new venue with access to a super lake, the River Trent and a lovely woodland area
- New Bumper Show Guide with more information on each activity and demonstration
- Bushcraft Bairs - more children's activities
- New exclusive activities for weekend visitors
- Souvenir Lanyard for Weekend Ticket Holders
- More activities and demonstrations

To keep up to date on The Bushcraft Show 2014, please sign up to our newsletter on www.thebushcraftshow.co.uk or follow us on Facebook - The Bushcraft Show or Twitter - BushcraftShow



Roll on 2014 – 24-26 May (See p62)

Here's what you thought...



BushcraftShow

Jo_Goodier

Great time @BushcraftShow last weekend!!! Special thanks to the organisers, the Massai Warrior dance troupe, and Helen Appleton, storyteller!

Borderbushcraft

@BushcraftShow had a great weekend worth the drive down from peebles. Ben Orford's the man and the showers and loos were spotless. See you soon.

hastingsspark

SO sad, back at work today after an absolutely fantastic weekend @BushcraftShow, will definitely be booking for next year, thanks!!

Beyondbushcraft

AMAZING WEEKEND @BushcraftShow. Thanks to all who came to see us at the stand and double thanks to all who booked courses :-)

Luluinthewoods

Just had the most fantastic w/e at the @BushcraftShow girls slept out under the trees all night + the weather was stunning, thank you so much!

Rolopanto

@BushcraftShow #greatday

cobaltgymcoach

On way home. What an epic weekend. See you next year! @BushcraftShow

PrimitiveTechUK

What a day @BushcraftShow – demoing all in the glorious sunshine, lots of stock sold, good times :-)

SuziGuy

Fantastic day @BushcraftShow wish we had a wkend ticket. Met @LoftyWiseman



The Bushcraft Show

Kathryn Swainson

"Really enjoyed the whole event... Loads to do... Clean loos and organised, but laid back approach to camping made it all the better. Learned lots and looking forward to next time."



Shaun Thompson

"Thank you so much for the most amazing weekend... The show was fantastic and the people we met were truly unforgettable. Can't wait till next year and hope the weather is as nice but I must remember the sun cream next time lol. Cheers every one especially Woodland Ways x"

Beneath the Stars – Leathercraft & Knives

"Just wanted to say a big thank you for organising a great show! It was our first year trading at The Bushcraft Show and we had a fantastic time. Well done to all those involved. See you again next year!! Sonni & Angela :-)"

Mykel Hawke

"It was a super weekend, and well done! Enjoyed it immensely! Thanks, Y'all! Mykel & Ruth"

Diane Fitzsimons

"Big thank you- what a wonderful weekend was had by all. What a friendly, helpful set of people."

Clare Whittam

"Well, you have scored lots of brownie points re the loos as everyone seems to have appreciated the up-market design and the continued cleanliness and replenished paper! Every lady I spoke with was so happy and pleasantly surprised by them... then the lighting was just the icing on the cake... same again next year would be most welcome. Thankyou xxxxx"

Johan Fechter

"Thanks for the wonderful time at this year's show! I just got back and what a weekend!"



"Thank you for such a wonderful show! You can really appreciate all the hard work that has gone into organising such an event. I was particularly impressed with the children's entertainment and projects - it really made the weekend a family event that everybody really enjoyed. My two children absolutely loved it! I like to look back and judge large events not on what I did do, but on what I didn't do. And I didn't get to do so much - as there was simply too much to do! This makes me want to come back year after year."

Mark Johnson



"Just a quick email to say that I thought The Bushcraft Show was an excellent event. Well organised, a great location, a ram packed program of events and lots of our target audience, to top it off, we even had good weather! Despite being there for work it felt like a (hard working and exhausting) holiday for ourselves given the atmosphere and all that was going on and was a welcome change from the office."

Ed Docwra, Managing Director - Mountain Munchkins Ltd

"Paul and I just wanted to say a huge, huge, huge well done on such a great 2013 show. Thank you also for letting us be involved. We can't tell you how much we enjoyed ourselves, and we have already had bookings as a result of being there. We'd really love to be involved again next year (very exciting new site!) Thanks once again!"

Claire and Paul Weller - Keswick Canoe & Bushcraft



Sorry we could not print all of your comments, but we would love to hear from you if you have any comments or suggestions for 2014 - email bethere@thebushcraftshow.co.uk.

Please complete our survey online <https://www.surveymonkey.com/s/YQM68YZ>



THE BUSHCRAFTS

'Where your hunger for adventure grows'

When? 24-26 May 2014*

*Weekend ticket holders can arrive on 23 May from 2pm

Where?

NEW LOCATION

Catton Hall, Walton upon Trent, Derbyshire, DE12 8LN

What's on...

Cody Lundin, co-host of the television series Dual Survival and author of 98.6 Degrees and When All Hell Breaks Loose is coming to The Bushcraft Show 2014.

Meet Survival Legend, John 'Lofty' Wiseman, author of the SAS Survival Handbook and Tracking and Survival.

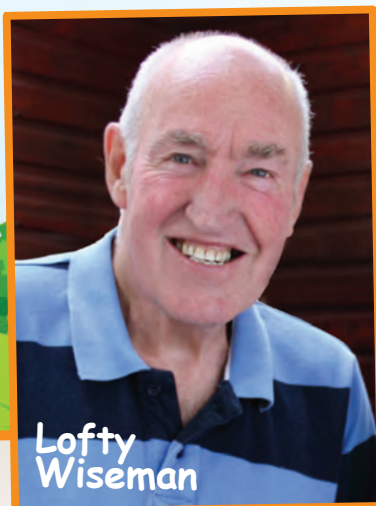
Expert - Perry McGee, son of the late Eddie McGee.

Try 4X4 Off Roading, Bushcraft on Horseback, Raku Firing, Whittling Sessions, Campfire Music, Wilderness First Aid, Bushcraft Career Advice, Firelighting, Shelter Building, Foraging, Woodland Crafts, Expedition Prep, Woodland Games, Competitions, Axe Throwing, Archery, Rifle Shooting, Flint Knapping, Leather Crafts, Open Canoeing, Knife Sharpening and Safe Use, Specialist Instruction, Wild Animals and see a host of Trade Stands, Bushcraft Demonstrations, Specialist Instructors, Expert Speakers and so much more...

**NEW
LOCATION!**



Cody
Lundin



Lofty
Wiseman



Perry
McGee

HOW 2014

Early Bird Booking Discount

Discount Code: TBS14EB25

BOOK NOW and save 25% off your entry ticket*

Discount Applies to Online Bookings Only

*Offer ends 30th September 2013

TICKET DETAILS 25% OFF* Ticket Price

Advance Weekend Ticket:

Adult	£95	£71.25
Child (5-15 years inclusive)	£40	£30
2 Adult & 2 Children Family	£240	£180
1 Adult & 2 Children Family	£145	£108.75

Advanced Day Tickets:

	Saturday	Sunday	Monday
Adult	£20 £15	£20 £15	£16 £12.00
Child (5-15 years inclusive)	£8 £6	£8 £6	£6 £5.50
2 Adult & 2 Children Family	£52 £39	£52 £39	£40 £30.00
1 Adult & 2 Children Family	£30 £22.50	£30 £22.50	£25 £18.75

Weekend Tickets include: Three Nights Camping with Luxury Toilets & Showers, Option for Open Fires, FREE Show Guide, Exclusive Evening Entertainment & Activities, Souvenir Lanyard, Exclusive Weekend Ticket Holder Only Activities, FREE Vouchers to Paid Activities and a range of FREE Activities & Demonstrations. Weekend Ticket holders can arrive early from 2pm on Friday 23rd May 2014 and depart by 6pm on Monday 26th May 2014.

**BOOK
TODAY**

Day Tickets include: FREE Show Guide and a range of Free Activities

Show Times

Weekend Ticket holders can arrive from 2pm on Friday 23rd May 2014

Saturday 24th May 2014: 09:30 – 17:30 (18:00 - Evening entertainment for weekend ticket holders only)

Sunday 25th May 2014: 09:30 – 17:30 (18:00 - Evening entertainment for weekend ticket holders only)

Bank Holiday Monday 26th May 2014: 09:30 – 16:30

For more information www.thebushcraftshow.co.uk
0333 4567 123 (option 2) • bethere@thebushcraftshow.co.uk

Perfect for
all the family



For show updates follow



The Bushcraft Show



BushcraftShow



Peaktipis

Creating Inspirational Spaces

Based in Derbyshire, Peaktipis is the premier supplier of Giant Nordic tipis in the Midlands and surrounding areas.

Our distinctive tipis offer a warm, friendly and relaxed atmosphere which is memorable for all the right reasons.

From weddings and private parties to festivals and corporate events, we have the ability to design a bespoke structure to suit you.



Don't miss out before they sell out!

FREE P&P

UK only - For a price for overseas back issues please email info@bushcraftmagazine.com

**£4.95
OR 3 for
£10.00**



Issue 01



Issue 11



Issue 13



Issue 14



Issue 15



Issue 20



Issue 21



Issue 22



Issue 23



Issue 26



Issue 28



Issue 29



Issue 30



Issue 31



Issue 32



Issue 33



Issue 34



Issue 35



Issue 36



Issue 37



Issue 38



Issue 40



Issue 41



Issue 42



Issue 43



Issue 44

To buy call
0333 4567 123
(option 1) or send
in this form. UK
offer only. Offer
ends 27th June
2013 - Offer not
available online.

OTHER PAYMENTS:

Name on card: _____

Card Number:

Valid from: / / Exp. date: / / Iss no:

Security no. (Last three digits on the signature strip):

Cardholder's House no. (If applicable)

Cardholder's Postcode: £

☐ I enclose a cheque / postal order

made payable to **SO Publications & Events Ltd for £**

Send the completed form, along with a cheque or postal order (where applicable) to:
**Bushcraft & Survival Skills Magazine, The Coach House, Turners Drive, Thatcham,
Berkshire, RG19 4QB.**

Calls to 0333 numbers are charged at local rate. SO Publications Ltd, publisher of Bushcraft & Survival Skills Magazine, may contact you with details of our products and services or to undertake research. Please tick here if you prefer not to receive such information by post ☐ email ☐ phone ☐
Bushcraft & Survival Skills magazine will not pass on your details to third parties.

YOUR DETAILS (ESSENTIAL)

Title: _____ Name: _____ Surname: _____

Address: _____

Postcode: _____ Country: _____

Daytime tel number: _____

Email address: _____

SUBSCRIBE TODAY! EXTEND, SUBSCRIBE OR RENEW...

BUSHCRAFT & SURVIVAL SKILLS magazine SUBSCRIPTION ORDER FORM BCM45

PAYMENT OPTIONS

☐ 1 Year Subscription

UK £29 Europe £55 Rest of World £72

☐ 2 Year Subscription (Plus FREE Stag Antler Whistle*)

UK £58 Europe £110 Rest of World £144

Back Issues:

£4.95 each or

3 for £10.00

Other issues SOLD OUT

1	11	13	14	15
20	21	22	23	26
28	29	30	31	32
33	34	35	36	37
40	41	42	43	44

TOTAL _____

Magazine binder £12.95 each inc P&P ☐

2 Magazine binders £20 inc P&P ☐

* The whistle is handcrafted so will be unique.

YOUR DETAILS (ESSENTIAL)

Title: _____ Name: _____ Surname: _____

Address: _____

Postcode: _____ Country: _____

Daytime tel number: _____

Email address: _____

GIFT RECIPIENT'S DETAILS

Title: _____ Name: _____ Surname: _____

Address: _____

Postcode: _____ Country: _____

Daytime tel number: _____

Email address: _____

OTHER PAYMENTS:

Card Number: _____ Name on Card _____

Valid from: ____/____/____ Exp. date: ____/____/____ Iss no: ____

Security no. (Last three digits on the signature strip): ____

Cardholder's House no. ____ (If applicable)

Cardholder's Postcode: ____

☐ I enclose a cheque / postal order

made payable to SO Publications & Events Ltd for £ _____

Send the completed form, along with a cheque or postal order (where applicable) to:

SO Publications & Events Limited, The Coach House, Turners Drive, Thatcham, Berkshire,

RG19 4QB.

SO Publications & Events Ltd reserves the right to send an alternative gift of similar value. Your gift will be sent separately within 28 days. Calls to 0333 numbers are charged at local rate. SO Publications & Events Ltd, publisher of Bushcraft & Survival Skills Magazine, may contact you with details of our products and services or to undertake research. Please tick here if you prefer not to receive such information by post ☐ email ☐ phone ☐

SO Publications & Events Ltd reserves the right to send an alternative gift of similar value. Your gift will be sent separately within 28 days. Calls to 0333 numbers are charged at local rate. SO Publications & Events Ltd, publisher of Bushcraft & Survival Skills Magazine, may contact you with details of our products and services or to undertake research. Please tick here if you prefer not to receive such information by post ☐ email ☐ phone ☐



SUBSCRIBE, EXTEND or RENEW
your subscription to Bushcraft & Survival Skills Magazine and get a FREE handmade Stag Antler Whistle on a reindeer leather lanyard (RRP £11.95) when you subscribe for two years!

Offer ends 29th August 2013

3 Easy Ways to Subscribe...

- Complete the subscription form
- Call 0333 4567 123 (option 1)
- Visit www.bushcraftmagazine.com



We are so confident that you will love Bushcraft & Survival Skills Magazine that if you are not completely satisfied with the first copy of your subscription, if you return the copy to us (and if applicable, unused gift) within 14 days from the purchase date, we will give you a full refund.

Go on, treat yourself – you deserve it!



In the next issue

USING THE CANOE AS A VEHICLE FOR FORAGING AND FISHING

Learn how to feed yourself with the aid of your canoe, which was one of its primary original roles after all!

How-to Make Fantastic Feathersticks

IN THE KNOW

Trail Cams and Night Vision Equipment

USE NATURE'S PIGMENTS FOR NATURAL DYING

Put your natural navigation knowledge into practice

MAKE YOUR OWN

long-range weapon spear-thrower – the Atlatl

LOFTY'S LIFE LESSONS

Learn from the SAS Survival Legend - John 'Lofty' Wiseman

How to make and fit a Mocotaugan handle

MEDICINAL MOLECULAR MIRACLES Find out exactly how medicinal plant chemicals actually work in the body

Check out the Wild Guide

And much more...



On Sale 29th Aug 2013

'DON'T miss out... subscribe www.bushcraftmagazine.com or see p66

CANOE CAMPING – HOW TO TAKE IT ALL

AUTHOR PROFILE:

Tim Gent

Happiest living in a tent somewhere close to both sea and mountains, Tim paddles and clambers in search of our remaining wild and inspiring places, documenting these experiences so that others might be encouraged to follow. A very enjoyable role of course, but one also undertaken in the belief that a better understanding of these fragile landscapes might offer the best chance for their survival, and ours.



Still raining gently and with an inquisitive tide beginning to feel its way once again up and along the stony bed of the River Hourn, the bank was fast losing its usual uncluttered simplicity. A blue tarpaulin flapped lazily in the breeze as Susannah dropped yet another mountain holdall close to the water's edge, adding to a growing pile of gear.

With four of us looking forward to spending at least two nights in comfort somewhere on the edge of the loch, our collection of camping kit could hardly be called modest. This wasn't helped by the addition of a large camera bag and tripod, three fishing rods and enough assorted tackle to cater for even the most varied angling ambitions. We were also keen to head out onto some very fine hills, but with snow lingering on the tops, there were still four pairs of boots, crampons and ice axes to add.

Anyone destined for the very pretty, but also lengthy and bumpy path along the southern shore of Loch Hourn to Barrisdale Bay, might now be concerned by this growing heap. Fortunately though, we didn't intend to put our knees through that unreasonable trial. We had two canoes to do our donkeywork.

A growing number of outdoor enthusiasts are recognising the benefits of the canoe, particularly those with a love of finding and spending time in our remaining empty places. These benefits are obvious - the canoe was designed to lug camping gear after all. For those wishing to escape the often dubious antics of our neighbours, but still keen to live well once beyond their reach, the canoe provides the perfect assistance. So what does a good camping canoe look like?

Well the easy answer, yet one with considerable validity, is almost any canoe you cast eyes on. Assuming it is manufactured by someone reputable, just about any will do the trick. Some designs will inevitably accomplish the job better than others of course. So what about the perfect camping canoe?

Now that is tricky. Gather half a dozen experienced canoeists together and they could work their way around that one for days and still not agree on an answer. But then you don't want to hear that of course. Keen to push off from the shore as soon as possible, a generous store of camping gear stowed aboard, you'd like help in selecting something appropriate right now.

So, deep breath, and here goes.

This mythical perfect canoe will be sixteen feet long.

Canoeing magic seems to favour this length. In fact, depending on intended use, a canoe of just about any length will serve perfectly well as a tent carrier. For those travelling solo, a craft as little as twelve or thirteen feet long will do the job. At the other end of the spectrum, vessels built to cater for extended expeditions can be over twenty foot. As a rough rule of thumb though, if you take sixteen feet as a good starting point, perhaps losing a foot for the lone paddler, or, if you have lots to carry, maybe adding one or two for those setting out as a pair, you won't go far wrong.

The beam (width) will be between 34 and 37 inches.

This is also fairly uncontentious. Canoes of this width will provide a good stable load carrier without being too slow. A beam of around 36 inches offers a sensible balance.

Cold weather canoe camping collection



Start by uniting tent and canoe



Heavy kit in first



The hull profile (from one side to another) will be what is called a shallow arch.

Personal preference starts to creep in here, and some may disagree, but this profile provides a perfect compromise. A flat-bottomed canoe - which is stable on calm water, is much less steady in bad weather or on a turbulent stream or river, when the hard angles where the flat bottom meets the side will catch moving water (waves) and pull the boat about. A round-bottomed boat is fast, but very wobbly.

Some expedition canoeists like a V-shaped hull, but for me, a canoe with a well-designed shallow-

arched profile is responsive and agile, with an inbuilt tendency to firm up on a lean – a reassuring characteristic.

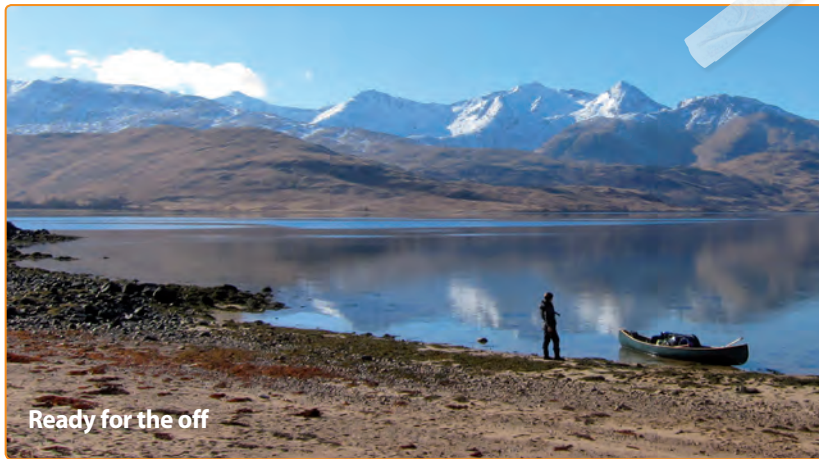
You should be looking for a canoe with a middle depth of not less than thirteen inches.

This means that even when heavily laden you still have at least six inches of freeboard - the distance between the water and the top of the gunwale (side rail). Canoes in the sixteen-foot bracket with a centre depth of 12 inches are pushing it a bit for load haulage. Some come with a centre depth of fourteen inches or more. This will provide a canoe that is likely to stay dry in rough water, especially useful in protected coastal situations or on wilder rivers. The disadvantage of a deep boat is that it will catch the wind, particularly when empty, and riding high. For the same reasons, canoes with higher upswept ends keep the water out, look good (as far as I'm concerned at least) but also leave you being pushed around by anything more than a light breeze. Your canoe should have a rocker measurement of...

This is where it all rather falls apart for your as yet cheery guide. No matter what I conclude about rocker, someone is going to throw a paddle in my direction. This is made all the harder by holding personal preferences that suit my canoeing, but which may not represent the best general advice.

To further complicate matters, I suspect manufacturers have various slightly different ways to measure 'rocker', which is essentially the amount that the bottom of the canoe rises at each end.

A good camping canoe, ready for loading



a cedar and canvas or cedar-strip canoe you can afford, please use it - they really do make ideal canoe camping craft. For everyone else, your choice is essentially between cheap and perfectly cheerful plastic, or more expensive composites and laminates.

Polyethylene or polypropylene canoes are robust, relatively inexpensive and heavy-ish. While a Kevlar canoe, or one made from any other fancy composite, should be stiffer and certainly much lighter, it will also cost a lot more. The choice is yours. In the end, just about anything from a well-known manufacturer will do. It is worth considering though that your superlight graphite boat won't respond to the almost inevitable knocks and scrapes that come with camping support in the same carefree way as your polywhatsit canoe.

If you place a canoe with no rocker on flat ground, there will be no gap at the two ends, beneath either stem or stern. A canoe with plenty of rocker, sat on the same surface, will show gaps at these extremities. In fact, if you were to grab hold of one end of this second canoe and lift it up and down, it would literally rock. What this means in practice, is that once afloat a canoe without any rocker has more hull sitting deep in the water at each end. Simple physics tells us that if you then try to pivot that boat around the centre point, or turn it, there will be significant lateral (sideways) resistance. The boat with little or no rocker is hard to turn. Conversely, a canoe with a generous amount is much easier to pivot, the upturned ends offering little sideways resistance. Now you might think this isn't a problem and if you were running down a rocky river, trying to avoid collisions, it wouldn't be. But once out on a big expanse of open water, that inbuilt ease of turning can become something of a pain. The canoe that wiggles its way amongst the rocks in a rapid, suddenly turns into a canoe that wiggles its way across a lake. Not much fun, and potentially very tiring.

So the solution? Compromise.



In most cases, a canoe with a reported rocker of around 1½ inches will be fairly nimble, dodging rocks on the river, while also not too unruly crossing an Argyllshire loch. For those that expect to be hauling their canoe about regularly in moving water (wilder rivers and the sea for example) adding a little to the rocker, but not taking it over 2½ inches might well be welcome. As I tend to enjoy most of my canoeing along the coast (the more protected bits at least) my preference lies in this direction. For those expecting most of their trips to be made across big flattish bits of water, then reducing the rocker will provide them with a fast canoe that goes where you want it to. The term horses for courses springs to mind. After all that, if you have a canoe already, unless it falls way outside the parameters mentioned above, it is unlikely to let you down, probably putting up a perfectly decent job.

So, in summary, that one near ideal boat is:

16 feet long
36 inches wide
13+ inches deep
Shallow arched
With a rocker of...1½ inches (bearing in mind the caveats mentioned above)

But then I haven't yet mentioned canoe materials. Plenty of choice again.

Wooden boats are so rare, and usually so costly, that I might as well move on to discuss everything else. If you are lucky to find

My last comment on materials concerns Royalex – a clever plastic laminate that forms a fine compromise in terms of cost, weight and durability – and my general recommendation. So I hope that covers the eventual resting place for your kit. Now what to put it all in before it meets the canoe?

The simple answer - dry-bags. Considering British weather, you really can't own enough of these, and that's before considering the chance of something inconvenient happening while afloat. Before the off, almost all our kit starts off being packed in a lightweight dry-bag. Only those items that can cope with a potential dunking – pots, pans, bow saws etc. – go in a standard mountain holdall.

We make the most of the rainbow dry-bag range on offer with a home-concocted colour coding system. If you're moving stuff around a lot, inevitable with camping, it is good (very good) to be able to put your hand on things when you need them. Bulkier items go in one of our larger, heavy-duty Ortleib bags. All our sleeping kit is stuffed into one for example, while our clothes end up in a large yellow holdall version. If you appreciate the obvious benefits of modern dry-bag use, but prefer a traditional look, I don't think it's cheating to double-bag inside a canvas outer layer.

Besides, excellent as these modern waterproof bags usually are, the material being almost totally trustworthy, the lid closure isn't quite as reliable. This is another reason to aim for the national dry-bag collection and the simple benefits and added security of double bagging really can't be overstressed. Following a good dunking, water may well be able to squeeze its way between the tightly rolled lid of one bag, but is unlikely to make it past the second before everything is pulled from the unwanted fluid embrace of river, lake or sea. Before particularly dodgy looking outings I've been known to triple-bag some dry-loving items before now, especially cameras. On a connected theme, one of my canoeing rituals is to start each trip by dropping my mobile phone and compact camera into a little white plastic pot made by a Dutch company called CurTec.

I've never been particularly keen on food barrels for camping – you know, the big blue plastic ones – which I find a little too bulky and unyielding, but I do acknowledge that they can't be bettered for protection. These little white watertight containers offer a useful compromise, sheltering the smaller stuff at least. Beloved of dinghy sailors, and available - as the advertisement might put it - at all reputable chandleries, it's surprising what will fit in. Even quite a large camera outfit can be shoehorned into one of the larger ones (a touch fiddly, but far cheaper than a purpose built waterproof case, and so much better than a dripping SLR).



The other important item to go in here is the van key. Remote central-locking may be rather wonderful, but modern car and van keys tend not to open doors following a dunking. Not a good thing to discover after two or three days spent somewhere wildish. So, in it all goes, before the cheery red lid is screwed down tight and the pot is clipped to the stern thwart.

So following that very useful naval adage that there should be 'a place for everything, with everything in its place', once packed, our camping collection looks like this:

- A tent (and groundsheet).
- A large heavy-duty dry-bag containing all sleeping kit
- A mountain holdall with cooking and fire related items and other less water-sensitive items such as candle-lamps.
- A food box (or wannigan) holding varied delicacies and some cooking utensils, towels, etc.
- An eating bag, with bowls and sporks. Like the mountain holdall this isn't waterproof, so more delicate items go in individual dry-bags.
- A dry-bag type holdall containing our clothes.
- A small bag each for personal odds and ends (mine always seems too full to close. It is worth the effort though. A bag secured against upset, but with an open lid, might as well be left loose to float away)
- The CurTec pot.
- Our trusty trug (not actually essential - it just feels as if it is).
- A bailing bucket and sponge.
- Spare paddle/s.
- Throw bag.
- Tie down straps.

At less clement times of year there's also the stove. But remember, this is just the way we choose to do it, offered as a guide. One of the joys of canoe camping is devising your own collection and packing system.

So, finally, back by the little River Hourn with everything scattered across the bank by your empty canoe. How do we pack it all in? Low and snug is best, and key to all good canoe packing is placing the heavy bits at the bottom. If you're taking a stove, this certainly goes in first. All but the smallest tents are best stowed down here too, as are hard-edged things such as food boxes (By happy chance, ours jams tight amidstships beneath the centre thwart). Weight should be distributed evenly, usually with a slight bias to the stern to help steerage. I admit this can sometimes require alteration. Working into a stiff breeze for example, it can be good to have the point of balance a touch ahead of centre, but it's often fine. Besides, you can usually pull ashore to adjust things easily if needs be. Practice is the best way to achieve this balance, but you'll soon tell if things are wrong when you compare the waterline with the gunwale. For standard running, just look to see the bow a little higher in the water than the stern.

As best you can, try to keep everything below the thwarts. Long

skinny things such as spare paddles, fishing-rod tubes, and camera tripods can be wedged alongside the lower layers – the spare paddle ready to be pulled free if needed. Light bulky stuff – folded groundsheet, sleeping kit bags and the like can be shipped above the thwarts quite happily if need be, tied down tight. If it's likely to rain, the groundsheet can be opened out as a cover, but as everything should be packed in dry-bags, this is more to help keep water out of the canoe.

Apart from the security of knowing everything will stay dry in rain, all this dry-bag use has another very important benefit. If water can't get in, air has almost as much trouble sneaking out. Even if packed tight, a lot of this lighter than water stuff remains trapped amongst clothing, bedding or food. A capped plastic road tube might hold six or seven litres of buoyancy for example.

All very handy should things ever go awry. It has been claimed before and I concur, that a canoe packed for camping, using plenty of waterproof containers, and with everything secure, may turn over, but is very hard to actually sink.

All this makes sense to me and I've tested it. And while aware that some canoeists prefer a system in which everything is stowed loose, tied only to a single long tether, I want to make the most of all that floatation. I also have concerns about dealing with kit floating beyond an upturned canoe, restrained only by a rope, while attempting to manage the sort of conditions that resulted in it all ending up in the drink in the first place. Following prolonged consideration, I don't want things to move.

Just to be on the safe side then, almost everything

I put regularly in a canoe has a climber's quickdraw clipped to it. Extravagant perhaps, and these lengths of super-strong sling with a karabiner at each end aren't cheap, but half a dozen make for individual security systems that are oh so easy to attach and remove. As I pack everything in, I just clip it into the next item, working the sling under or around a thwart to help.

To provide the main security system I've found that the 5m Palm straps I use to hold the canoe on the van's roof-rails make excellent tie down fastenings. You'll probably already have these, or something like them, so no need for more expenditure. Unlike using ropes, there's no need to master a range of difficult knots (which even if you can tie them are never much fun to produce with cold wet hands). Just thread them through and over everything, loop them around a thwart or seat strut, and pull tight. Stored, stowed and ready for the off.

And so, at long last, as the bow slices through the water towards your chosen campsite, and cares slip away in your wake, I hope you find as much enjoyment out there as we do.



A place for everything, and everything in its place

TRADING POST

MilitaryMart – Hoods (UK)

The Home of Army Surplus
We at MilitaryMart specialise in Ex Army surplus kit from all over the world, we source suppliers and buy direct cutting the cost to you the customer... Not only do we sell Military Surplus we have a large complement of outdoor pursuits and camping equipment. We usually hold large stocks of Swedish trängia's, reindeer hides, scandanivan rucksacks, military clothing and much more...

T: 01695 228 323

E: sales@militarymart.co.uk

W: www.militarymart.co.uk



"Hands on Bushcraft run fun and enjoyable bushcraft and survival courses in Wiltshire."

We offer a wide range of courses to suit the needs of all skill levels.

Learn the skills to live comfortably in the woods, not just to survive but to thrive in the natural environment



Various courses throughout the year, contact us to find out more

www.handsonbushcraft.co.uk



Photography inspired by a girl's passion for the Wilderness and love for the Whimsical.

Commercial • Portraits
Art Prints • Dreams

Email - katie@annabellawhispersphotography.co.uk

Blog - annabellawhispersphotography.blogspot.co.uk



FIRE LIGHTING

Traditional & Modern Tinderboxes, 'Flint & Steel' Fire Making, Amadou and Char Cloth Tinder Ferrocerium Fire Lighters.

HAND-MADE LEATHER

Bespoke Belts & Sheaths. 'Possibles' Pouches, Quivers and Cases.

SHARPENING TOOLS

Japanese Water Stones, Diamond and Sapphire Ceramic Whetstones, Leather Razor Stropps & Guided Sharpening Systems.

E: info@sharkdesigns.co.uk • W: www.shark-tinderbox.com
T: 01634 241 049



XASUK

Wild Camping, Outdoor & Army Surplus Soecialists. At XASUK we insist on only selling equipment we'd use ourselves. With worldwide shipping, we're never out of reach.

T: 01729 840 876

W: www.XASUK.co.uk



Beneath The Stars – Leathercraft

Handmade leather items primarily for use in a 'bushcraft' or outdoor environment, including; knife, axe and saw sheaths, as well as camping accessories.

W: www.beneaththestars.net

T: 07917358857

E: beneaththestars@live.co.uk



BESPOKE LEATHER CRAFT
INSPIRED BY THE DAYS
OF THE OLD WILD WEST



matthew-roberts@hotmail.co.uk • 07875 717 861



Jack Raven Bushcraft & Woodland Skills

Based in an Area of Outstanding Natural Beauty in the heart of Kent, Jack Raven Bushcraft is dedicated to providing its customers with an unforgettable bushcraft experience.

W: www.jackravenbushcraft.co.uk

T: 07553 763397

E: info@jackravenbushcraft.co.uk

CONDIMENTS 4 CAMPERS

single portion sachets online

salt • pepper
tea • coffee
chocolate spread
muesli • milk
sugar • etc

no minimum order

www.singleportions.co.uk



TIPIS AND TENTS REPAIRS & ALTERATIONS

We have been in the repair and alterations business for OVER 30 YEARS!
Call the experts now for a quote.
All our work is fully guaranteed so you have total peace of mind!
Nationwide Collection & Delivery Service

Call the Experts or Visit our Website

CANVAS REPAIR CENTRE

Established
Since 1979

TELEPHONE 01283 541721
www.canvasrepaircentre.com



Nick Gough, approved Practitioner of the Institute of Outdoor Learning, offers bushcraft and survival courses in the beautiful Snowdonia national park. 1-2 day courses set in 200 acres of ancient woodland, Canadian Canoe Wildlife Safaris, Wild Fishing, Camping & Bed and Breakfast



T : 01341 423407

M : 07958 413277

W: www.woodlandersbushcraft.co.uk



The Natural Choice for Woodburning Stoves



From the foothills of Dartmoor, renowned for its cold winters, Yeoman has grown to become one of the leading stove manufacturers with a wide selection of traditionally-styled woodburning and multi-fuel stoves; with the additional versatility provided by our gas and electric versions. There are also several high-output boiler models (up to 18kW) for a complete home heating solution and new to the Yeoman family is the eye-catching CL range with its modern traditional styling, making them the perfect choice for 21st century living.

Burning logs in our high efficiency clean-burning stoves is an environmentally friendly, carbon neutral and cost effective heating source, so opt for a Yeoman - the natural choice for a natural warmth



CL Stove Range

WOOD • MULTI-FUEL • GAS • ELECTRIC • BOILER STOVES

FRONTIER BUSHCRAFT

3 day Taster Course 31st May - 2nd June



If I said to the male bushcrafters out there "Wife points" I dare say that there would be a lot of wry smiles, raised eyebrows and knowing nods. I had none of the afore mentioned points to get to The Bushcraft Show this year and one of the main drains was the Frontier Bushcraft course I had booked for the next weekend. What better time to do a course with Paul Kirtley than a week after he picked up an armful of trophies in the Best in Bushcraft awards?

In the past, Paul has been kind enough to help me with some material for a Scouting magazine article, as well as contributing some of his own pieces. On top of that he wrote two articles for the Haynes Outdoor Adventure Manual (reviewed in the previous issue of this magazine) so I was really looking forward to meeting the guy in person and made sure that he was leading the course. And so to the course itself. The automated booking process is very easy to use, the kit list is fit for purpose with applicable notes and the directions are clear and easy to use. It's also worth noting at this point that is quite literally three full days of bushcrafting.

The meeting place is by a public house on a road between two villages and in due course the instructors, Paul and Henry and assistant Stuart came down to meet us. After a quick headcount and introduction we were led away on a short drive and then a short hike to our corner of a 500 acre estate in East Sussex that is managed organically (which is reassuring for water usage and foraging on courses). We were in an area of mainly birch and sweet chestnut with fallow deer, badgers, rabbits and pheasants as neighbours. There were also a lot of yellow pimpernel flowers about the place but the ice age spring that we had endured meant that they were totally upstaged by a fantastic late display of bluebells.

We sat on rustic benches under the almost obligatory parachute teaching area, complete with wet wipe board and kettle with which to prepare a brew from the stock of tea, fruit tea, coffee, sugar, milk and cordial provided. With brew in hand we introduced ourselves to the instructors and fellow attendees before Paul ran through camp and sharps safety and the importance of good camp hygiene. Paul then went on to explain that the course content can vary with the time of year, available natural resources and so on, but the weekend we were on was typical in terms of what to expect.

That done we were straight off to the woods with folding saws

AUTHOR PROFILE:

Austin Lill

Keen hobbyist bushcrafter, who enjoys searching out flora and fauna in around the town of Ware, where he lives. He rates creating fire from a bow drill after five attempts as his most significant bushcraft moment (along with completing his collection of Bushcraft and Survival Skills magazine!). Austin is also involved in Scouting and has contributed articles to both the Scouting magazine and the Outdoor Adventure Manual.



to collect suitable wood for making pot hangers and tarp pegs, using the Mora knives we were issued with (and could keep). After this we were handed our Aussie tarps and British army bivi bags and once shown the necessary knots, we went off to find our own personal piece of woodland.

We broke for lunch soon after which was a help yourself affair with several different breads, cheeses meats, accompaniments

and fruit, which really set us up nicely for the afternoon programme. We started off with a talk on shelter building and as a team set about building a two-man debris shelter, which any course attendees could use to sleep in as they saw fit. Henry then took over and introduced us all to basic fire lighting with a single match. This skill was put into practice because Paul showed us how to gut and prepare a trout and we had to get our own fires lit

to cook them! Once we were cleared away we had a quick talk on using bivis and then most folk climbed into them for the night.

The day started early with bannock making which we had with bacon and dropped coffee (which is great fun to make), after which we started the morning's first tutorial. This was a carving project to make a simple yet elegant butter knife. Using some easy to split sweet chestnut, Henry talked us through it and it built on the previous day's knife and green woodworking skills. Stuart made a particularly handsome example.

Once we had got our butter knives either finished or to the stage where they could be taken home and refined, Paul then led us off on a long tour of the flora (after another buffet style lunch)





which saw me go into note taking overdrive as the facts came thick and fast. We passed by the side of one of a handful of small lakes that are utilised by Frontier Bushcraft in advanced courses and found some fresh water mussel shells as big as a man's hand. The route was purposely circular, as we then learned about tracking and used the circular route to follow the sign we'd left, (akin to an elephant trail in places!) The tracking was complemented by a talk on appropriate clothing and a water pistol tracking game the next day. We finished off with a beef stew made in a billy using our pot hangers.

One sign that we had done and achieved a lot was that the last day seemed to come around so quickly. It was another early start to see Paul run through making pancakes with bacon and maple syrup. Next we headed off to meet Henry who did a great demo on rabbit preparation with minimal knife usage, ably assisted by Stuart who chipped in to help people where needed. The lesson was made all the better by the fact that the rabbits had been freshly despatched and still needed gutting. Our lunch on the final day was slow-cooked rabbit in cider and it was my favourite meal on several levels. It started with Henry's demo, then Paul and Henry jointed the meat while folk got a brew on, Paul de-boned it as a couple of us prepped the veg and then Paul and Henry cooked it. A great meal done communally between students and instructors. It's worth noting that you are fed well and the ingredients used on the course, whether purchased or sourced on site, were of a high quality.

Knife sharpening was one area of bushcraft I was aware I needed to improve, so I was both keen and nervous to get this session under way. Just before lunch Paul took us through the various grinds and how the sharpening process works. We were shown oilstones, waterstones and stropping and then used the skills shown to hone our complimentary Moras (another linked-in session) during the dinner break. I approached the oilstone with some trepidation but I got Paul to check and he gave me a couple of pointers to finish the job off and I was really pleased with the final result. He watched me stropping on my belt to make my action smoother (whilst trying not to concentrate on my loose trousers!)



Time was marching quickly towards the end of the course, but after we all packed away our kit there was still time for everyone to buff up some sweet chestnut inner bark (which we had collected on an earlier walk and dried) and put into practice the flint and steel demonstration we had just been given. We also had a question and answer session with Paul where he chatted briefly about some exciting future projects (alas no book as yet). The course reached its natural end after the stated time and reluctantly we had to break both for those catching trains and because there was an imminent tracking course starting.

Now the opening part of this write-up might leave some thinking that I'm just a Paul Kirtley sycophant, so for a second opinion I asked aspiring bushcrafter Liam Gadd, who was also on the course, to tell me what he thought of it. He said "Paul really is a great guy, I had expected this from my research and I knew a lot about him, but my research was nothing compared to actually meeting and learning from him which was a great experience. He's an enthusiastic, patient and knowledgeable bushcraft instructor. Everyone can learn a lot from him and he really shares information with you on the course. He's also very "to the point" and there is no hiding anything, so if you are doing something incorrectly he will tell you, show you and then let you crack on. There is time in which to take in your last lesson and practice the skills you've been learning about too. Whether you have experience or are just seeing what bushcraft is all about I would recommend Paul Kirtley and Frontier Bushcraft to anyone".

This article reads a bit like a list, but that's because there was so much to report on so don't be fooled by the course title. I'm not new to bushcraft but I learned a lot of new stuff as well as refining things in my current skill set. As oxymoronic as it sounds, there's a gentle intensity to the course with early mornings and late finishes and lots of demos and projects which are pretty much all linked up. My long term plan is to visit different bushcraft schools and instructors to experience different styles and subjects. If this is your aim too, make sure Frontier Bushcraft is on the list.



**PERRY McGEE'S
NATIONAL TRACKING
SCHOOL**

EMAIL
info@nationaltrackingschool.com

HOTLINE
0870 835 9395

www.nationaltrackingschool.com




HELLE

**Nature makes no
compromises.
Neither does Helle.**

ALDEN

4.5" Curly Birch handle
4" Sandvik 12C27 stainless steel blade
8.5" Overall length
Weighs 5.1oz
Supplied with leather sheath

FOR STOCKISTS CONTACT:
WHITBY & CO
T: 01539 721032
E: sales@whitbyandco.co.uk
www.whitbyandco.co.uk/helle




ClockworkCloud MEDIA

PHOTOGRAPHY • GRAPHIC DESIGN • CINEMATOGRAPHY

Outdoor & adventure sport, landscape & natural world, freedom & lifestyle

Creative solutions specialising within the outdoor industry

Beginner landscape photography tuition in the beautiful Peak District National Park (One to One)

TEL: 07590 564 436
EMAIL: andy.childs@clockworkcloud.com
WEB: www.clockworkcloud.com



Frontier Stove

Make the most of the outdoors with the Frontier Stove. Weighing only 10kg it really is truly portable. Frontier Stove £140, Water heater £80

CAMPING SOLUTIONS.CO.UK

Call 01872 870839 for more or visit www.campingsolutions.co.uk



BOATS AND RAFTS

On our family holidays no one is ever content with just sitting around on the beach. If the children aren't active, the arguments and relentless teasing begin, and then no one enjoys themselves. One favourite activity that always tempts both young and old off their backsides is to ignite everyone's competitive spirit with a boat making competition.

AUTHOR PROFILE:

Fiona Danks & Jo Schofield

Fiona and Jo are passionate about young people having the opportunity to explore and enjoy the natural world and each of their six books aims to entice children away from a screen-dominated world and into the outdoors for some fun and adventure. They both live on the edge of the Chiltern Hills in Oxfordshire where they create many of their ideas for their books, articles, and workshops.



Fig F



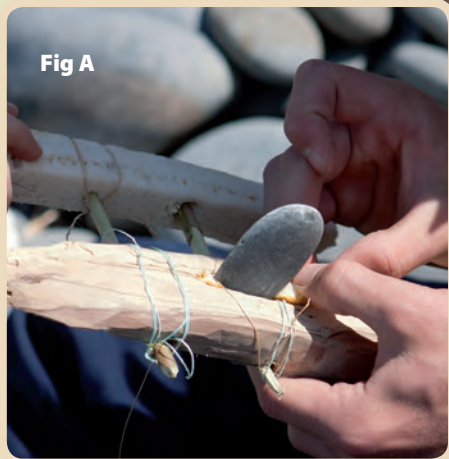


Fig A



The winner is the one that arrives intact at a pre-arranged spot downstream



Fig B.



Fig E



Fig C



Fig C

The brief is always the same; design and make a boat or craft of any description from materials scavenged from the surrounding area. Although we do allow ourselves to use string and scissors brought from home they aren't usually required. Once everyone has perfected their boats, the challenge is to see how well they float, or, better still, if they are up to racing down a stream – the winner is the one that arrives intact at a pre-arranged spot downstream. The boats are always different and have become more sophisticated and radical as the children have grown older; marks are often given for ingenious design and resourcefulness! It is often the simplest boats that win, so every person, however young, has an equal chance. But the real key to success is to add a weight, keel or outrigger to keep the boat upright in the water (Fig A).

The pictures here show the diversity of crafts designed on one Cornish holiday, when every piece of rubbish on the beach was investigated to see if it might become part of a boat. Eighteen-year-old

Lucas's Indonesian outrigger, complete with canvas sail, (Fig B), competed with Ben's beautiful mono-hull driftwood yacht with tin keel, feather mast, tiller and rudder. (Fig C) But Dan's less aesthetic, robust tomato ketchup torpedo boat with polystyrene outriggers (Fig E) pipped them all at the winning post!

River Boats

While on a walk beside the River Tay in Scotland we stopped for a while, just wanting to enjoy the late afternoon sunshine in such an idyllic place. Someone



Fig F



Fig B

started fiddling around making a boat from natural materials. Soon everyone had joined in, experimenting to see what types of boats we could make using only twigs and leaves found along the river bank; we were there for ages and no one wanted to go home at the end of the day. If you are really clever you can have a go at making sails from leaves or old bits of thin cloth and then seeing if the wind will actually push your craft along (Fig F).

Flaming boats and mini nightlight rafts

One incredibly still summer evening as we walked back after a holiday drink at the pub, the full moon shone on the mirror calm sea. There wasn't a single breath of wind and it seemed the perfect night to try making nightlight boats. As it was an impulsive decision we were unprepared, but within minutes Ben was cutting an old juice tetra pack in half, pulling out the ends to make two perfect boats. The waxed coated cardboard ensured they were completely watertight. We rummaged in our rucksack to find some nightlights (which we always carry with us, winter and summer!), and put them in the bottom of each boat. Although there was no wind, the tide's movement meant the boats travelled pretty quickly so the candles went out, but Ben solved the problem by making a little well out of tin foil and pouring lighter fuel into it. Once lit, the boats flamed like magnificent torches out across the sea. Due to the water all around this was relatively safe, however if you repeat this you should make sure you know where they will float in advance (so they don't drift into trees or grasses) and be able to retrieve them afterwards (so you don't litter the environment). The best way to do this is to attach a long bit of string to one end of your boat so you can reel it avoiding any chance of it getting carried off on the current.

On another summer's evening we made little rafts by lashing together sticks of a similar length and dimension and floating them on the pond in our garden. On top of these we placed a nightlight. We protected its flame from being extinguished by the breeze by covering it with the top part of an empty clear plastic bottle. The pond twinkled in the evening light and the garden was transformed into a magical place (Fig G).

Safety Tip

This activity must be supervised by adults
Only use a small amount of lighter fuel
Keep the boats tethered on fishing line so you can retrieve them afterwards.

Rafts

While camping at a village on the northwest coast of Scotland we sensed an air of anticipation and excitement. We had hit upon the annual fundraising Applecross raft race when a motley collection of home made rafts race across the bay – it was quite a sight and most rafts didn't make it! Many outdoor centres offer raft building

to schools and also to parties of adults – this is a great teambuilding exercise. A raft is a flat, floating structure without a hull; traditional rafts were made of reed or wood, but nowadays they are more often made from a combination of buoyant materials – wood, sealed

barrels, inflated air chambers, plastic containers or even sealed plastic bottles.

The Mini Raft Challenge

Our friend Iain set Hannah and Fiona the challenge of making a raft big enough to float a can of baked beans. The girls tackled this enthusiastically, using a plastic container, two wine bottles and some doweling fixed together with string and wire. They added a mast and a paper sail and then took it down to the sea, casting it adrift but keeping it safely tethered on fishing line. The raft floated very well, thanks to the mast and to the baked beans, which improved stability.

Try the raft challenge out for yourselves –



Fig G



Fig H



get everyone to make a raft to carry a chosen item – whether that's a tin of beans, a teddy bear or your picnic lunch! Can your raft carry its cargo safely across the water and keep it dry?

Real rafts

Connie was very excited about the raft building party at a local outdoor centre on the river Thames. They had to build a raft from a pre-assembled "kit" of large plastic barrels and wooden frames, as shown in this photograph. A piece of rope was attached round both ends of each barrel; four barrels were then secured beneath each wooden frame as shown. The ropes must be tied very tightly round both the barrels and the wood. Everyone was equipped with life jackets and helmets, then cast adrift on the river – with each raft firmly attached to a safety line. They hardly travelled any distance but had great fun drenching the occupants of the other rafts!

Rafting is great fun – but because of the inherent risks we suggest finding an outdoor activities centre offering raft building before having a go yourself. If you plan on building your own raft, do remember that you will always need more buoyancy than you think. Large plastic barrels are perfect for raft building, but aren't always easy to get hold of. Make sure all holes and leaks are plugged, and place the barrels lengthways. Then build a wooden frame, which can be attached to the front and back of each barrel, hugging each one tightly with approximately one third of each barrel coming up above the frame.

Safety tips

Make sure there is always adult supervision near water

Don't float little boats on large deep rivers – they are best for streams or rock pools or at the edge of the sea. If you want to make sure you can easily retrieve them, tie a bit of sting to one end then you can reel them in just like a kite if the going gets a bit rough!

If having a go at real rafting, try it out first at an activity centre and always wear life jackets. Make sure you get advice on the river and water conditions before you set off. Never take risks, always seek advice from experts.

For more great activities in the wild, take a look at Fiona and Jo's book "Make it Wild" www.goingwild.net





CAREER ADVICE & SITUATIONS VACANT

CAREER QUESTION:

Hi,

I am 15 years old and next year I have to choose my A-Levels, I know that I want a career in the outdoors and aspire to be a bushcraft instructor. I practice bushcraft skills all the time at home. What A-Levels do you think I should pick to help me become a bushcraft instructor?

Thank you,

Theo

ANSWER:

Hi Theo,

I'm afraid I'm so old I can't remember how many choices you have? Plus I went through the Northern Irish system... I'm assuming it's four?

Bushcraft is about following your heart and your passions! So study what you enjoy and love - that will inspire confidence, development and drive! Be an individual.

I can tell you what I studied... but don't see this as a road map, I was quite arty-farty, so loved art classes. Drama and music also foster similar self-expression.

- Art - To improve manual dexterity, spatial awareness, crafts and affinity for working materials
- Biology - To gain a firm grounding in how the natural world operates, from the anatomy of a flower or mammal, to genetic selection
- Geography - To gain insight into earth sciences and other cultures / peoples around the world
- English Literature - To learn to communicate effectively. Becoming a word-smith is a valuable asset as an adult

But... this is about YOU. Self-development is key, just focus on what inspires you and the rest will drop into place.

Cheers,

Ben McNutt, Woodsmoke



Submit your career question to info@bushcraftmagazine.com

SITUATIONS VACANT

BUSHCRAFT

& SURVIVAL SKILLS

Bushcraft & Survival Skills Magazine Full-time Office Administrator

Based in Tamworth, Staffordshire

Job Description

arranging appointments
dealing with correspondence and queries
preparing letters, presentations and reports
liaising with staff, suppliers and clients
delegating tasks to junior employees
ensuring that health and safety policies are up to date
using a variety of software packages
attending meetings with senior management

Key Skills: reliability, adaptability, good interpersonal skills, organisational skills, communication skills, IT skills, problem solving skills

Send a covering letter and full CV to
info@bushcraftmagazine.com

Bushcraft Instructor

Do you have a position that you would like to advertise for FREE?

This is a FREE facility so if you are a company or charity and would like to advertise your job vacancy to a target audience, please get in touch – info@bushcraftmagazine.com

#BUSHCRAFTSHOW 2014

Volunteer for The Bushcraft Show 2014

How would you like to be part of The Bushcraft Show Team?
See behind the scenes at The Bushcraft Show
All sorts of volunteer positions available

Perks:

Free Weekend Entrance to The Bushcraft Show
Limited Working Hours
Discounted Food
Staff Show T-Shirt

To apply for this position send a letter to
bethere@thebushcraftshow.co.uk

Instant Updates

Follow our Facebook page for immediate Situations Vacant updates



Bushcraft & Survival Skills Magazine





Woodland Ways
Bushcraft & Survival

Join the UK's largest provider of intermediate to advanced Bushcraft Courses

Woodland Ways is the largest provider of Bushcraft & Survival Courses in the UK, with industry leading instructors, including Jason Ingamells, Kevan Palmer, Adam Logan and more you know that your course will be of the highest quality. Courses operate in our many centres throughout the UK, we also operate completely unique overseas expeditions.

We have a vast range of courses too numerous to mention, including our exclusive 2 year course, The Woodland Wayer.

In 2012 Woodland Ways also opened the UK's first World of Bushcraft experience store, based in Bedford. A completely unique centre to come and learn, research and buy Bushcraft!

- Day Courses
- Weekend Courses
- Week Long Courses
- Overnight Courses
- Team Building
- Family/Young Adult Courses
- 4x4 Voyager Courses
- The Woodland Wayer - 2 year course
- Overseas Expeditions



Winner of...

**BEST BUSHCRAFT
INSTRUCTOR**

**BEST BUSHCRAFT
COURSE**

**BEST BUSHCRAFT
SCHOOL**

Finalist

**BEST BUSHCRAFT
RETAILER ONLINE**

**BEST BUSHCRAFT
INSTRUCTOR**

CALL NOW ON 01234 351006

info@woodland-ways.co.uk • www.woodland-ways.co.uk

SPONSORED BY



by CRAGHOPPERS

**"IF YOU RISK
NOTHING
YOU GAIN
NOTHING."**

BEAR GRYLLS

BEAR GRYLLS SURVIVAL CLOTHING

BEAR AND THE TEAM WOULD LIKE TO THANK BUSHCRAFT
& SURVIVAL SKILLS MAGAZINE FOR A SUCCESSFUL SHOW.

FOLLOW US

