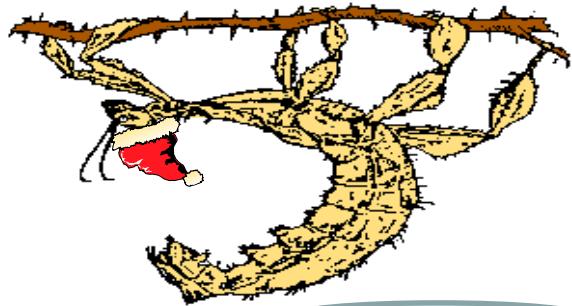


The Phasmid Study Group

DECEMBER 2012
NEWSLETTER No 129
ISSN 0268-3806



2013 Membership Renewal Due.
No price increase! See page 4.



ET? See Page 36.



Eurycnema goliath.

**See
Page 6.**



Ctenomorpha gargantua
the longest stick insect in the world? Read more on Page 15.



Origami, see Page 8.



Mystery Stick Insect, see Page 10.



***Necroscia annulipes* see Page 22.**

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THE COLOUR PAGE!



Necroscia annulipes (Male & Female).
See page 22.



Acanthoxyla geisovii & *A. inermis* with different spines. See page 25.



Bactrododema tiaratum See page 32.



Mystery Stick Insect (female). See page 10.



LHIISI. See page 34.



From the PSG Website. See page 33.



Mystery Stick Insect (male). See page 10.



Competition Winners.. See page 5.

Editorial

Welcome to the December PSG Newsletter. (See it in full colour on the PSG website). And on behalf of the PSG Committee, may I wish you all season's greetings for a very **Merry CHRISTMAS** and a prosperous and **HAPPY NEW YEAR**.



Membership Renewal Due. The time has come to renew your PSG Membership. And the prices have been frozen for yet another year. What a bargain! To renew, please see page 4.

PSG Winter Meeting & AGM. Thanks to the excellent work of Judith and Ed, we have another fantastic PSG Winter Meeting & AGM lined up for Saturday, 19th January 2013. For further details see page 7. In particular, please note the meeting will start half-hour earlier than usual at **11.30am** (as we have so much to fit in!). Also, there are 2 awesome competitions that absolutely everyone can take part in – the Picture and the Livestock competitions. See page 7 for further details, but basically just bring in a photo or picture and/or your best livestock, and you may well win a wonderful prize. You are also welcome to donate items for the raffle. Bring your membership card with you for access to the meeting (if possible, please) – note that your 2012 membership card covers you until 31st January 2013.

The Future of the PSG Newsletter - SURVEY. I've always thought of the PSG Newsletter as the main flagship of the PSG; well I would say that wouldn't I, as I have had the privilege to be its editor, off and on, for so many years. However, there is a matter we need your help with please. I had permission to make this Newsletter a 36-pager, but please be aware that the affordable norm is for 2 Newsletters per year at 24 pages each (with a small leeway). Many thanks to everyone who did the Newsletter survey (see page 19), but I had few replies and it was mainly to seek members' views on the content of the Newsletter. We now need to think of costs. *We do not anticipate any imminent major changes*, but we would respect your input before considering anything. Please, do complete the loose-leaf survey by 31st January.

The PSG Annual General Meeting (AGM). Our AGMs are usually short and painless. If any member is interested in taking up a post on the committee or who wants to assist a committee member, please contact Judith by 10th January. In particular, Natalie seeks assistance with the PSG Website (see page 33). And Judith wants to know if you think the PSG has improved (see below). Last year at the AGM it was said that the PSG Website and Newsletters had room for improvement, and the PSG needed to be more innovative. Indeed, I was one of the critics. I think there have been some significant improvements since then (see PSG 2012 Progress, page 33) – what do YOU think? Have your say at the AGM!

(PS Please contribute to the Newsletter, see page 31 for details).

Regards to all, Mike Smith

CALLING ALL MEMBERS! 'What do you think of it so far?' *by Judith (Chairman, PSG)*

– and if the answer is still 'Rubbish!', what do we do next? We hope that the efforts we have made to revitalise the PSG have made a difference – we know the Newsletter and Facebook have been very effective. However we are not complacent, and know there is always going to be room for improvement – so we would like to hear from you. Please tell us your ideas, suggestions for activities at meetings, any comments or complaints – and if you would like to be more actively involved in the running of the PSG, please, please volunteer your services! Email to Judith j_marshall@nhm.ac.uk or to any other committee member (we do communicate with each other!) by 10th January please.

The PSG Committee

Chairman: **Judith Marshall.** The Natural History Museum, Cromwell Road, London, SW7 5BD. Tel: 0207 942 5610, E-mail: chairman@phasmid-study-group.org. or j_marshall@nhm.ac.uk.

Treasurer/Membership Secretary: **Paul Brock.** 2 Greenways Road, Brockenhurst, SO42 7RN, E-mail: p.brock@phasmid-study-group.org or pauldbrock@btinternet.com.

Newsletter Editor: **Mike Smith.** 13 Runnacles Street, Silver End, Witham, Essex, CM8 3QN. E-mail: newsletter@phasmid-study-group.org.

Webmaster: **Natalie Ford** (with assistance from Mike Strick, Chris Pull, Nick Wadham, & Ed Baker). Contact via the PSG Web page, or E-mail: webmaster@phasmid-study-group.org.

Phasmid Studies Editor: **Ed Baker and Judith Marshall.** (For Judith's contact details see "Chairman", above). Ed's details: The Natural History Museum, Cromwell Road, London, SW7 5BD. Tel: 0207 942 5975. E-mail: phasmidstudies@phasmid-study-group.org.

Exhibitions: **Paul Jennings.** 89 Brackendale Avenue, Derby, DE22 4AF. Tel: 01332 343477. E-mail: exhibitions@phasmid-study-group.org.

Livestock Coordinators: **Mark and Ian Bushell.** 43 Bradford Road, Trowbridge, Wiltshire, BA14 9AD. Tel: 01225 747047. E-mail: livestock@phasmid-study-group.org.

Merchandising: **Gavin Ridley and Mike Strick.** E-mail: merchandise@phasmid-study-group.org.

Other members: Phil Bragg and Ian Abercrombie.

Membership Renewal Due Now for 2013

To renew your membership of the Phasmid Study Group (or to join)

Payment can be: in cash to Paul Brock at the AGM and Winter PSG Meeting in January, by *PayPal* (see below); by cheque (in £ sterling and drawn on a UK bank) payable to: "The Phasmid Study Group"; or by Postal Order or International Postal Giro to:

Paul Brock, 2 Greenways Road, Brockenhurst, SO42 7RN, England, UK.

Or see the membership page on the PSG website: www.phasmid-study-group.org/Join-PSG

For overseas members not using *PayPal*: cash may be sent (at your own risk) in your own currency (add an extra £3.00 for exchange rate variations), we recommend using registered post.

Only £12 UK, £14 Europe, or £15 Overseas. (Prices held for another year!)

Any problems contact Paul Brock by E-mail:
pauldbrock@btinternet.com, or p.brock@phasmid-study-group.com.

PSG Membership benefits include:

PSG Meetings, copies of the PSG Newsletter, all areas of the PSG Website, and free stick insects.

Cut this form out, or photocopy it, or download it from the PSG Website, and give it to Paul Brock with your membership subscription (all information held in confidence):

PSG No (if any): _____ Name: _____

Address: _____

Post Code: _____ Country: _____

E-mail: _____

Subscription: £ _____

Donation: £ _____ (optional)

Total: £ _____

Please note that Membership Cards will be handed out at the January Meeting, or sent out with the June PSG Newsletter.



PSG MEMBERSHIP FORMS



If you want any copies of the colourful, new Membership Form eg for handing out at shows, demonstrations, museums, zoos, pet shops, etc. please print them from the PSG website, or contact Paul Brock. Many thanks.

HOW TO PAY PSG MEMBERSHIP BY PayPal

- Log into your *PayPal* account (or set one up at www.paypal.com)
- Click the "Send Money" tab
- In the "To" field, enter: **pauldbrock@btinternet.com** (NOT p.brock@phasmid-study-group.com)
- In the "Amount" field enter the correct amount for whether you are in the UK £12, Europe, £14, or Overseas £15
- There is no surcharge for using *PayPal* (so ignore any old PSG literature that says there is)
- Please ensure the currency select is "GBP – British Pounds"
- Then select the option that says "I'm paying for goods or services" and click "Continue"
- The next page will show a summary of the details – please scroll down to the bottom of the page where it says "Email to Recipient"...
- Change the Subject field to "PSG Member Fees"
- In the "Message" box, please put your full name, address and PSG membership number (if you have one already)
- Finally, click "Send Money" to complete the transaction.



PayPal

If you could then drop a quick email to Paul Brock: **pauldbrock@btinternet.com** just to let him know you've paid, he can check everything has gone through OK and confirm your membership.

PSG Summer Meeting, 7th July 2012 by Mike Smith

The occasion was well up to the best standards of any PSG meeting I've attended. There was something going on all the time, and something there for everyone. *Wonderful!* I did not do a formal count of attending members, but I'd estimate there were about 60 there – around half our membership, what a great turnout. Congratulations to the meeting organisers Judith and Ed on a job well done.



For me the day started early Saturday morning when I made my sandwiches for lunch, packed my made-at-home stick insect, put some paperwork together, then drove round to my friend Karl's house. Karl and I then travelled together to the Natural History Museum meeting, and it made a pleasant change to have some company for the long journey.

We left Essex in warm sunshine, and arrived at the Museum in showery rain. Apparently, rain had subsequently covered all of England over the morning, and that was no surprise given the terrible summer weather we'd been having. Fortunately we did not get too wet while queuing to get into the museum, and we discussed the delightful architecture of the building, in particular the little animals sculptured into the walls.

I took the first turn of "meeting and greeting" members, giving out membership card holders, some paperwork, and explaining where everything was. We had an excellent display of invertebrates by Nick Wadham, the make-a-stick-insect table by Derek TP, books for sale by Paul Brock, the livestock exchange table, and of course the welcome refreshments – including some delicious cakes with our PSG emblem on them. But most of all there were other PSG members, and I never tire of chatting with our wonderful membership – indeed there is never enough time to speak to everyone as much as one would like, maybe the meeting should last all weekend!



Very quickly it was 12 noon and Ian gave the first talk. His subject was collecting phasmids, and he spoke of his last trip from Singapore to Borneo. He had numerous excellent photos, and gave a very interesting insight into his amazing journey. Listen to his next talk at the Winter PSG Meeting.



We stopped for lunch, and afterwards Nick Wadham gave an informative talk on Giant Invertebrates of Movie, Myth, and Legend. Nick explained how and why invertebrates were the different sizes they were over the life of the earth, and why so many monsters, of movie, myth, and legend, were technically impossible. A summary of his talk is on page 20.

The Panel of Experts were then at hand to answer any questions. Foremost was perhaps the question of the proposed EU bug ban, (see pages 11 and 12 in this Newsletter). There was then a

question raised that was very dear to my heart, on why healthy female Jungle Nymphs kick the bucket just before or after adulthood. As you may be aware, I am expert at getting female JNs to just before or after adulthood, but sadly I always lose them before they lay any eggs. It was suggested that they should be given water to drink and very high humidity – I'll give it a try! The only other question I recall was about *Diapherodes gigantea*, someone was losing their nymphs at the first or second moult. It was suggested mixing their food, ie giving bramble, rose, eucalyptus and bay leaves, and keeping nymphs in a different, more humid, container than the adults. Adding that the leaves would then need to be torn for the nymphs, as they find the hard rim of the leaves difficult to eat, which I think is good advice for all nymphs not kept with older sticks.

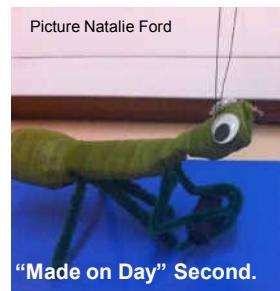


Then came the Make-a-Stick-Insect competition results. The competition was a resounding success, the craft table was busy all the time, and the entries were of a general high standard. I think the majority took T-shirts as prizes, though a blue PSG teddy was also gratefully received. "Here's one I made earlier...". 1st: Robert Bradburne: with a fantastic origami *Extatosoma*, 2nd: Sami Barnett-Jones: Fimo (a modelling clay) *Heteropteryx*, and 3rd: Jennie Williams: Felt *Peruphasma*. "Made on the day...". 1st: Owen Mayes (Yellow-winged black job), 2nd: Karen: Mantid, and 3rd: Kayla & Nick Swinnerton: Stripy-legged stick.

Thirty voting slips were received, with a total of 180 votes cast across the competition. There were 9 entries in the "made earlier" class and 10 in the "on the day" class. On-the-day materials included card, tissue-paper, expanded foam tubes, wire, pipe-cleaners, sticky paper, and "googlie" eyes. [My thanks to Derek, who ran the competition, for passing this information on to me.]



(Above) Derek's craft table – it was well-used.



"Made Earlier" Second.

"Made Earlier" Third.

"Made on Day" Second.

"Made on Day" Third.



"Made on Day" Winner.

I then handed the cuddly, PSG Teddy to Cat Baker, who won the competition we had in the March PSG Newsletter.

We finally moved on to everybody's favourite part of any meeting – the livestock exchange! This was very lively as usual; there were some crackers on offer and hands were flying up all over the place hoping to get some. I got more than I bargained for eg the table seemed awash with *Paraphasma schultei*, I put my hand up for a few and got about 5 containers of the blighters handed to me. There were also some less popular ones left over at the end which had to be taken back – though two people, mentioning no names, managed to convince me to take

some of them home. Indeed, I ended up with more critters than I had suitable containers at home for, so I had to buy some more...but I got some bargains, and I cover this elsewhere in the Newsletter (see page 14).



Michael with the *Eurycnema goliath*

Inset picture Natalie Ford.

There is usually at least one person, wandering around any meeting, with a cracking good stick on show. On this occasion it was Michael, Rowena, and Derek TP with a magnificent *Eurycnema goliath*.

Read more details on Robert Bradburne's origami *Extatosoma* on page 8 in this Newsletter.

All good things must come to an end



Après stick?

and so the meeting finally closed. There is a tradition that some members disappear around a pub after the meeting for a swift half...or two. I've never joined them before; always keen to start the long journey home for various reasons (though I've no objection to the odd tipple). But Karl and I went along this time, and it was very enjoyable – please join us next time. The next meeting is our Winter Meeting and AGM on **19th January 2013** (read more about it on pages 7 and 8 in this Newsletter), and I look forward to seeing you there.

W o t i s i t ?



"Can you identify this phasmid?" Was recently submitted via the Ask A Question feature on the PSG website. Well, do YOU have any ideas? (Guess before moving on).

Fortunately, Paul Brock identified it: it is a Thread Legged Assassin Bug, or *Emesaya brevipennis*. (ie it is not a phasmid!)

According to Wikipedia, *E. brevipennis* is a New World species of assassin bug in the subfamily Emesinae. There are three subspecies, all of which occur in North America north of Mexico. The subspecies *Emesaya b. brevipennis* is the most widely distributed and is reported to be bivoltine [ie organisms having two broods or generations per year] in Southern Illinois. This subspecies has 5 instars and has been reported to rob spiders of their prey and to prey upon spiders. The species also will prey upon conspecifics [i.e. other members of its own species]. (Whoever wrote this for Wikipedia was a bit scientific!)

PSG WINTER MEETING & AGM, Saturday, 19th January 2013

DOROTHEA BATE ROOM, NATURAL HISTORY MUSEUM, CROMWELL ROAD, LONDON, SW7 5BD, UK.
(FREE PUBLIC ENTRY* to Natural History Museum, also the nearby Victoria & Albert and Science Museums)

If you have any comments on what you would like to see at future PSG Meetings, or if you would be willing to give a talk or other offering at a meeting, please let Judith know. E-mail: j_marshall@nhm.ac.uk

PLEASE BRING AND WEAR YOUR PSG MEMBERSHIP CARD - A HOLDER WILL BE PROVIDED.

AGENDA*

(Any item may be reviewed on the day. Please help us run on time.)

10.00am – 11.30am	WELCOME, members are invited to exchange ideas and experiences. View the displays of GIANT stick insects from the NHM collection. View entries and take part in the Picture and Livestock competitions**. Buy raffle ticket and maybe win a prize! Five tickets for £1****. View and add to the Bring & Buy stall. Have a drink, biscuit, and cake from the refreshment table***. Renew your PSG Membership with Paul Brock.
11.30am – 12.00 noon	Illustrated Talk on Australian Stick Insects by Paul Brock.
12.00noon – 12.30pm	PSG Annual General Meeting (If anyone wants to volunteer for a post, please contact Judith).
12.30pm – 1.00pm	Illustrated Talk on the Origin of Orthoptera by Adrian Durkin.
1.00pm – 1.10pm	Illustrated Talk on Stick Insect Origami by Robert Bradburne.
1.10pm – 2.00pm	Lunch (AND an Origami Practical Session by Robert Bradburne).
2.00pm – 2.30pm	Illustrated Talk by Ian Abercrombie.
2.30pm – 3.00pm	Panel of Experts answer your Questions on stick insects/general discussion.
3.0pm – 3.15pm	Raffle, Competition results, and prize giving.
3.15pm – 4.00pm	Livestock Exchange****, and final viewing of displays, etc.
4.00pm – 4.30pm	Competitors and exhibitors to collect their entries; leftover livestock**** should be taken back by the contributor (please check).
4.30pm onwards	Close of meeting.

*You are requested to bring this sheet with you for security reasons to ensure access to the *meeting room* (bring in the whole Newsletter, or a photocopy of the appropriate page, if you do not want to tear the page out). The agenda will also help you follow the proceedings.

**The competitions could not be easier, just bring along some livestock or pictures on the day. As at previous meetings, competitors to arrive by 1.30pm. On arrival, the competitors will be advised on how to register, and competitors can enter as many times as they wish. Labels for the exhibits will be provided and should be filled in at the meeting. The judge's decision is final. Except for the competitor and judge(s), there must be no handling of any entries. The PSG and committee accepts no liability whatsoever for damage/loss of entries. For the picture competition, bring in your photos or pictures and put them on display. For the livestock competition, put livestock in their own containers/cages no bigger than necessary, with food. Each container to hold only one species, either a single specimen or one pair (male and female). All entries are to be labelled with the stick insect's scientific name, food plant and, if applicable, PSG No.

*** Tea, coffee, squash, and biscuits will be available all day (from about 10.15 am), for a voluntary contribution, in the meeting room (courtesy of Judith). Food shops are available in the museum, offering good food at reasonable prices, but there may be queues. You are welcome to bring your own lunch, to eat in the meeting room or in the museum. You may also "donate" cakes, biscuits, etc, if you wish.

****You are reminded to follow the rules as laid down concerning the Livestock Exchange: eg livestock should be given some foodstuff, and their container must be clearly labeled with their name & PSG number; the food plant they are being fed on, and your name & PSG number. **Please don't forget to check before you leave that all of your livestock has been distributed and, if not, take them back with you.** Do not overcrowd the sticks, but also please use reasonably-sized containers (not too big), and do not spread the spare stock over too many different containers (especially common species). Please remain in your seats throughout the session – ie do not crowd round, or obscure, the livestock table during livestock distribution.

***** You are welcome to donate items for the raffle.

PSG Winter Meeting, Saturday 19th January 2013 by Mike Smith

Yes, another fantastic meeting awaits all PSG members. Just take a look at the agenda on page 7 and see for yourself. See also the June PSG Newsletter for general details of the meeting. But to remind you, I'll repeat some of it here. Good news - entry to the meeting, and to the Natural History, Science, and Victoria & Albert Museums, is completely **FREE**. Please bring your PSG 2012 Membership card with you (members who have lost or forgotten their membership cards will still be able to access the meeting, but checks will be made to ensure they are members, and a temporary members' name badge will be issued). Note that your 2012 membership card covers you until 31st January 2013.



Dorothea Bates Meeting Room.
The door at the back leads to it.

Non-members who accompany members will be given a white name badge to wear. Only members can vote and/or collect free livestock. Please ensure your visitors do not vote at the AGM. The museum's main entrance is in **Cromwell Road, SW7 5BD**; there is also a side entrance in **Exhibition Road** (which tends to have shorter queues). The queues can be quite long, but still usually take only 15-20 minutes maximum. Please note bags are searched on entry for "dangerous" objects so knives, scissors, etc should not be brought in. The nearest tube train station is South Kensington which is on the Circle, District, and Piccadilly Lines. Bus routes include: 14, 49, 70, 74, 345, 360, 414, and C1. But before you travel best check with London Transport for any planned closures (eg for engineering work). Phone **0207 222 1234** (+44 207 222 1234 from overseas), or go to the website www.tfl.gov.uk.

How to Fold Your Own Stick Insect *by Robert Bradburne*

At the PSG Summer Meeting everyone was invited to make their own stick insects models on the day and/or beforehand and to exhibit them all for other members to see. This was not only a great way to entertain the children (and several adults!) on the day, but also gave me an excuse to try out something I had been meaning to do for a long time – fold an *Extatosoma tiaratum* from a single square of paper.

I've been doing Origami, the ancient art of Japanese paperfolding, for many years. Over the last five years I have started to develop my own



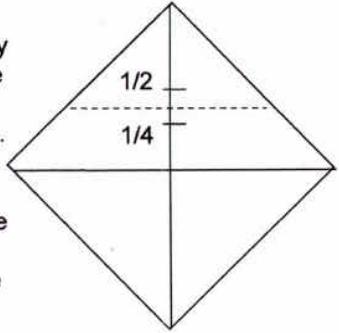
models. The problem with folding stick insects is that they have lots of long legs and other bits that stick out of quite a compact body. This makes them not the easiest subjects to form from a plain square of paper (which, of course, only has four corners to start with). The original Japanese models of arthropods either did not have very many legs (they were simply suggested in the shape of the model) or used cuts in the paper to produce many legs. As far as I know, no stick insects were ever folded!

However, in the 1970s, a growing American interest in Origami led to new techniques being developed to fold lots of long points out of uncut squares of paper and, with the help of some hefty maths and computer programmes, to work out ways of locating these on the paper that made a huge number of extremely complex new models possible. If you want to see just what is possible, visit the websites of Brian Chan (<http://web.mit.edu/chose tec/www/origami/>) and Robert Lang (http://www.langorigami.com/art/gallery/gallery.php?tag=arthropods&name=flying_walking_stick – there's even a fully winged stick insect here - amazing!). In the past I've altered some of these complex models to form my own insect species. For example, Manuel Sirgo's stick insect in his book "origami menagerie" makes very good models of leaf insects and *Haaniellas* with a few alterations, and he's created a very good "Pharnacia" and other species <http://design.origami.free.fr/indexEN.html>, although not all of these have diagrams.

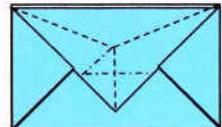
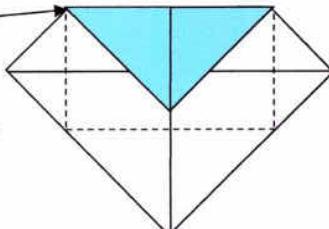
More recently, however, I have wanted to have a go making a stick insect from scratch based on what I've learned from others. I'm no mathematician nor computer scientist, and so I have developed my own models without complex mathematical techniques. The results are therefore fairly straightforward in structure, but they are not necessarily very easy for the novice to fold as they involve lots of pleats and "sink" folds to generate the long legs. However, I've tried to produce diagrams here that I hope will enable some of you if you have any interest in Origami to produce the basic stick insect shape from which you can then make into your own favourite species, or try, as I did, to recreate the PSG Emblem. Origami has a language all of its own, but there's lots of help on the internet. The following pages give a good description of the various folds that I mention in the diagrams (valleys, mountains, rabbit ears, swivels and sinks). http://en.wikipedia.org/wiki/Yoshizawa%20%93Randlett_system. Also, http://www.origamiaustria.at/diagrams/boxpleating_guide_3.pdf gives a very good description of how to do an "Elias stretch", which you will need to do for the front and back legs of your stick insect. I folded my E.t. from a 35cm square piece of paper made by gluing some aluminium foil between two sheets of yellow ochre tissue paper using spray mount glue, but any strong, thin Origami paper should do the trick. I hope this encourages you to have a go at folding a stick insect of your own (or indeed to have a go at other insect origami from the books published by some of the experts mentioned in this article). I'll probably be at the PSG AGM in January, so I look forward to finding out how you have got on with creating your own Phasmids!

See the next page for pictures to demonstrate how to make the origami stick insect. In any case, I shall be on hand at the PSG Winter Meeting & AGM to demonstrate how this is done and to answer any queries.

Use a 30cm square of very thin paper the same colour on both sides. Crease the diagonals, then pinch the $\frac{1}{2}$ and $\frac{1}{4}$ points on one diagonal

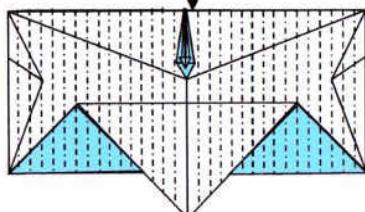


Valley Fold the $\frac{1}{2}$ mark to the $\frac{1}{4}$ mark, then valley fold in the other edges to make a rectangle

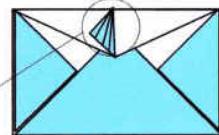


Fold the tip of the top flap underneath and then rabbit ear it

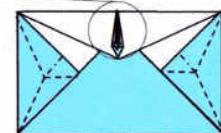
1. Pleat the whole model in 32, then open out again
2. Pleat sink the two rabbit ears at the sides to line up with the pleats
3. Fold the bottom corner down so that it is 8 pleats wide where it crosses the folded edge



Zoomed in to show detail of the squash folds

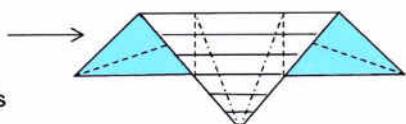


Thin the circled triangle with two squash folds

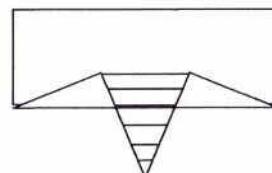


Rabbit ear both sides of the model

Pleat the lower point finely to give 6 abdominal segments



Then thin it with swivels to leave it less than 4 pleats wide where it crosses the edge

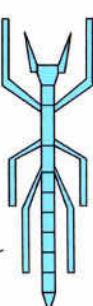


The result (just showing the abdomen flap) – now re-pleat the model

The pleated model



If you pull out some of the pleats you can make the leafy legs and abdomen of *Extatosoma tiaratum*



Side view



Elias stretch top and bottom to give front and back legs.

Free the antennae

Stretch the centre legs, pleating the body backwards

If you thin all the legs and the antennae, then you can make a Pharnacia – type stick insect.

Now you have all the flaps you need to make lots of species of stick insects.



Mystery Stick Insect Discovered by Matt Walker Editor, BBC Nature

A mysterious new species of stick insect has been discovered living in the Philippines by scientists. The stick insect is wingless, lives on the ground rather than in trees, and is spectacularly coloured, having a green-blue head and orange body. The insect also vents a foul-smelling spray to deter predators. The stick insect is so unique that scientists have given it its own genus and do not yet know its relationship to other stick and leaf insects.



"Recently a colleague, entomologist Oskar Conle, showed us some museum specimens of a strange-looking stick insect found several years ago on Mount Halcon, a remote locality in the Philippine island of Mindoro," explains Marco Gottardo, who is studying for a PhD at the University of Siena, Italy. The insect was found on the third highest mountain in the archipelago, which is considered one of the richest areas of biodiversity in the world. "We were baffled. It looked so different from any other known stick insect in the world that we immediately realised it was something very special." Mr Gottardo and colleague Philipp Heller carefully examined the specimen. "We concluded that it represented an unknown genus and species of stick insect," Mr Gottardo told BBC Nature. The scientists have published details of the discovery in the journal *Comptes Rendus Biologies*. "The new stick insect is wingless, with a stout body and rather short legs," says Mr Gottardo.

The scientists think these features are likely to be special adaptations for living in the low-growing vegetation of a montane rainforest. Most tree-dwelling stick insects that live in the forest canopy have slender and elongated bodies and legs, thought to provide good camouflage among sticks and leaves. "Another unique characteristic is the spectacular colour pattern. [A male] has dark bluish-green head and legs, and a bright orange body with distinctive bluish-black triangle-shaped spots on its back," he adds. It is more likely that the insect uses these striking colours to warn off predators, rather than as a form of camouflage. "In fact we have discovered that the new stick insect has the ability to release a potent defensive spray from glands located behind its head. "The defensive substance is sprayed when the insect feels threatened, and has a strong distasteful smell, which likely functions to repel potential predators in a similar way to skunks," says Mr Gottardo. The scientists have named the insect *Conlephasma enigma*.

"We have named the new stick insect with the specific epithet "enigma" because its systematic position in the tree of life of stick and leaf insects remains a mystery," says Mr Gottardo. Many of the stick insect's distinctive features are unlike those recorded on other stick insects. One feature, however, has been seen before. The microstructures of *Conlephasma enigma*'s mouthparts are strikingly similar to those held by another group of stick insects. The problem is that these stick insects live in tropical America, on the other side of the world, raising the question of how two insects so far apart might share a similar trait. The researchers hope that a more detailed molecular analysis of the stick insect's genetics may shed light on its true identity. "We also hope that the discovery of this particular new insect species may draw attention into the problem of rainforest conservation in the Philippines, which are home to unique and still poorly known wildlife," Mr Gottardo says.

Ref: <http://www.bbc.co.uk/nature/19399735>. Source - BBC News / bbc.co.uk - © [2012] BBC.



If any readers are aware of stick insects in the news, please draw the items to my attention, many thanks – Editor.

Alien Species, Proposed EU Legislation by Mike Smith

Many members may be aware that the EU is proposing some legislation to limit the sale and keeping of "alien" species of animals and plants. Knowing how the UK embraces all EU legislation more keenly and rigidly than other countries (no matter how eccentric the subject) it has worried some PSG members as to how it might limit or prevent them keeping phasmids legally. I show below two stories I've picked up on the subject (which I also distributed at the PSG Summer Meeting), but then read Mark's definitive update (page 12).



Dr Woods & his children.

Midland Boffin Slams EU Bug Ban

Brussels' bureaucrats have come in for stick from a Midland maths boffin – following legislation that could see stick insects banned from sale. And Dr David Wood, Principal Teaching Fellow at Warwick University, has warned the European Parliament: If you want an ugly bug brawl, you'll get one. Under the bombshell Invasive Alien Species proposals, part of the EU's 2020 Biodiversity Strategy, pet shops look set to be blocked from selling non-native creepy crawlies. The move is an attempt to stem the rising tide of foreign species which are colonising our countryside and chewing up the eco-system. It's bad news for Dr Wood, who is carrying out a study to break down the walking habits of tropical bugs into a mathematical formula for his research into robotics. And he told the EU: Leaf it out. The 42-year-old believes Brussels hasn't twigged one simple fact. Stick insects can't survive long-term in our cold climate. Dr Wood has stick insects at his office. His daughters Natasha, eight, and Sofia, seven, keep them as pets at the family's Coventry home. He told the Sunday Mercury: "It's absolutely crazy. Stick insects are bred in captivity in the UK, but originate from hot tropical countries such as Australia, New Guinea, Malaysia, India, Thailand and Borneo. "People know not to release them because this is prohibited under the 1981 Countryside and Wildlife Act. "Even if some were released or escaped, they would soon perish. Even with climate change, overnight temperatures in the UK are far too cold for them to survive." Dr Wood fears a UK snub on stick insects could have a catastrophic effect on our education system – and deprive it of future scientists. Children develop an interest in the natural world as a direct result of looking after their own stick insects," he explained. "Some of these children go on to have successful careers as scientists." The EU outlines the eco threat posed by Invasive Alien Species – plants, animals, fish or insects – and the lack of legal powers to stem the tide. It states that options to deal with this include a wider ban on the import and sale of numerous creatures from abroad. Dr Williams has demanded his children's pets are not on the list and has called on UKIP for support. UKIP's West Midland MEP Mike Natrass, said: "They should stop bugging the British people with an ever-increasing spider's web of tacky regulations and leave Westminster to legislate. Many specialist pet shops could be put out of businesses as a result of these regulations. "Stick insects are hardly crocodiles. They pose no risk to life and limb and, in fact, stick insects are captive-bred commercially in the UK."

Ref: <http://www.sundaymercury.net/news/midlands-news/2012/06/24/midland-boffin-slams-eu-bug-ban-66331-31247178/>

Ban on Exotic Pet Markets Across the EU

Scientists call for a ban on exotic pet markets across the EU to protect animal welfare, public health and biodiversity. A new independent scientific report, released today [2.5.12], has resulted in calls for an EU-wide ban on exotic pet markets to protect animal welfare, public health and biodiversity. The report, commissioned by the Animal Protection Agency, International Animal Rescue, Eurogroup for Animals and other European animal protection groups, was this week presented to Caroline Lucas MP and Keith Taylor MEP. Scientists investigated amphibian and reptile markets across Europe and carried out onsite inspections of key events in the UK, Germany and Spain. In the UK, scientists visited the Doncaster Dome on 18 September 2011. Stress-related behaviours were commonly observed in the animals and the report described the conditions and treatment of the vast majority of amphibians and reptiles as 'tantamount to animal abuse'. It was noted that veterinarians charged with inspecting the animals had failed to identify systematic welfare problems. The report also highlighted the health risks to attendees. Reptiles and amphibians typically carry germs that contaminate their general environment and, within a short period of time, probably spread to humans with a potential of causing infections. Also, of concern was the risk involved in subsequently hiring out venues contaminated by reptile and amphibian events for a variety of other purposes, including activities involving children. Says Caroline Lucas MP: "Since selling pets in the street and markets was banned in 1983, so much has been done by local councils, animal welfare groups and the courts to almost eradicate the practice. Yet animal sellers have tried numerous tactics in their attempts to continue their trade, and a handful of councils have yet to recognise and take action to stop commercial animal trading disguised as an innocent hobby. This is why urgent action is needed now." Says Keith Taylor MEP: "Selling wild animals in bad conditions on market stalls is both inhumane and unnecessary. It is bad for the animals, who frequently show signs of stress, and also bad for human health. Non-native species are becoming a major environmental concern and exotic pet markets can only add to this problem. It is crucial that the European Commission takes action to tackle this issue." Another important finding of the study was that these markets provide a key route for exotic amphibians and reptiles (captive-bred, as well as wild-caught) to spread throughout the EU and impact on local ecosystems - at great cost to EU economies. The report will be presented to the European Commission, which is currently considering measures to address Invasive Alien Species. Ref: www.apa.org.uk and www.internationalanimalrescue.org.

PSG Summer Meeting Comments

At the PSG Summer Meeting, the above subject was raised and discussed. It seemed that few, if any, members were fully aware of the specifics of the proposed legislation, except for Mark Bushell who had read a great deal of the literature that is publicly available online. He advised that no blanket ban was being proposed, but rather it was being looked at on a case by case basis for each species. The only aim is to deter the distribution and / or release of potential commercial pests as well as species that have, or could have, a negative impact on native biodiversity. It will most likely have minimal impact on the pet market in general or phasmid keeping in particular and, as Mark put it so subtly, there is no likelihood of the Alien Species Police kicking down the doors of PSG members for keeping exotic stick insects. I hope he is right! Anyway, now read Mark's excellent article on the subject.

European Strategy on Invasive Alien Species by Mark Bushell



At the July meeting in London the subject of European Strategy on Invasive Alien Species was raised during the Q & A session; pushed for time we only briefly discussed it. However it is important so I thought producing an article that actually encompasses what the proposed strategy is about and attempting to summarise it, rather than relying on scaremongering articles that have been produced and / or circulated, or hearsay from internet forums would help clarify this complex subject. The article below is primarily a summary of various reports and comments on the subject and I encourage the membership to read into it further – after all, it's always best to know what things are actually about before they get “panned”...

Introduction

The EU strategy on Invasive Alien Species (IAS) has been in development for a number of years and has arisen from a concern that IAS are not only threatening biodiversity within Europe, but are also capable of or are already impacting on the commercial and economical aspects of the EU. It should be mentioned that before the EU IAS strategy, the Convention for Biological Diversity (CBD) was set up to create a global effort to protect biodiversity in all accounts (the UK had signed up to this), and that the EU IAS is following guidelines that had been set down by this convention – the CBD having identified IAS as being a major threat to global biodiversity. The Bern Convention, to which the EC and 38 European states are party to, requires Parties to “strictly control the introduction of non-native species” (Article 11.2b)

Also the Global Invasive Species Programme was launched in 1997 – a team of volunteers from organisations such as the International Union for Conservation of Nature (IUCN), which was essentially a tool-kit for helping countries to protect and control IAS, as well as promoting regional cooperation. Sadly, this was closed down in 2011, mostly due to the global recession. Despite all the work I've listed above, Europe still straggles behind other states / countries in regards to protection from IAS, notably Australia / New Zealand and the United States of America.

The EU Invasive Alien Species Strategy

Europe is a global trading “hub”, with much inter-state commerce, as well as intra-state commerce. The result of this is that large volumes of species of animal and plant are shifted around, either intentionally or unintentionally, into and within the EU. In summary, the EU IAS strategy aims to address the problems, both existing and future, by:

- Increasing awareness of the issues caused by IAS as well as methods to tackle them, with key actions identified and prioritised within national and regional areas.
- Prevent the introduction of new IAS, as well as curb the spread and adverse damage caused by IAS already present.
- Recover and restore, where feasible, habitats and ecosystems that have been adversely affected by IAS to such a state that biodiversity loss is either halted or reversed.

This strategy will cover both marine, freshwater and terrestrial environments and will also cover alien species from all taxonomic groups including viruses, prions and bacteria (!).

Focus Groups:

Within the EU IAS strategy there are several “working groups”, all helping to collate information and produce what will be the final document. It would take an entire year’s worth of Newsletters for me to summarise the work that has been done so far so I am just going to concentrate on the “Priority Species Working Group”. This group consists of several European ministers for conservation, ecology, agriculture, the environment and nature, as well as groups such as Ornamental Fish International and Birdlife International. Experts from museums, environment agencies and universities and of course the IUCN are also present for decision making, something this single document required a lot of!

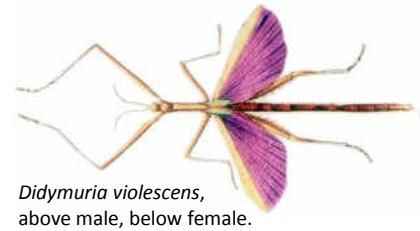
Black Lists, White Lists and Species Selection:

Currently it is believed the best way of controlling the spread of IAS would be through the use of lists, known as Black Lists and White Lists for species of organisms that could be potentially IAS. The principle of each list is:

- Black List: A list of organisms that are known to be destructive to biodiversity, or are thought to be potentially destructive following rigorous transparent research into the species or group.
- White List: A list of organisms known to not have any impact on biodiversity, either due to their non-survival in an alien environment or their being native to the region already.

Currently there is debate over which system to use regarding potential IAS, mainly in the sense as to which is going to facilitate species evaluation and also bear in mind what will work best for Europe as a whole. The most likely outcome will be the use of a black-list for known invasive species in order to halt their spread, accompanied by a “grey” list, where species that are an unknown quantity are evaluated according to solid science, risk assessments and transparent analysis. There is also the scope to allow different member states to select which species are actually needing a ban (i.e. a species of IAS that can survive and breed in Spain may not be able to survive the UK weather, so may not need to be banned from the UK). Whether this happens or not I cannot predict, although it is possibly the easiest system to implement, and anything that does become implemented will need to be easily accessible and easy to use. However, feel free to read the document fully to get a better grip on it – it is all online.

There is already an existing list of blacklisted species currently accessible though the EU page (link at the end of this article). It comprises a large number of species that have been identified as IAS and that cause damage to biodiversity, commerce or health (both human and animals / plants). One thing to note is that the list does not include any phasmids, although there are species which are considered to be pests when in large groups, such as *Didymuria violescens* [see pictures]. However, these species are unlikely to become established over here!



IAS and the Media:

Recently there was a brief flurry of interest in the media regarding the EU IAS strategy, with some stories being quite informative while others put things quite out of perspective! One report was based around "boffin" Dr. David Wood detailing how the EU was planning to ban the sale of stick insects in the UK and how it should be opposed strongly; unsurprisingly a UKIP representative (Paul Nuttall MEP) threw his weight behind this as well. In the article Dr. Wood says that:

"It's absolutely crazy. Stick insects are bred in captivity in the UK, but originate from hot tropical countries such as Australia, New Guinea, Malaysia, India, Thailand and Borneo... Even if some were released or escaped, they would soon perish. Even with climate change, overnight temperatures in the UK are far too cold for them to survive."



While he is technically correct on this, a small amount of digging would have shown that there are a few species of New Zealand stick insect present in the South-West of the UK and have been here for over 100 years! I will also point out that they have had no negative impact on the UK biodiversity that we know of. However, it would be pertinent to highlight that according to the Wildlife and Countryside Act 1981 it is **illegal** to release a non-native species of animal, including stick insects, in the UK even if the chance of them surviving in the wild is slim to none.

In response to this article, Chris Davies, a Liberal Democrat MEP (isn't politics wonderful?) stated that:

"Everyone knows that UKIP hates the EU, but it's now clear that they hate our environment too. The problem is not with the keeping of foreign animals but of whether they pose a threat to other species here by multiplying quickly if released... "In Britain our red squirrels have almost been killed off, native crayfish in our rivers are retreating before American crayfish, while Himalayan balsam is taking over our hedgerows and destroying our plants, yet UKIP thinks invasive species pose no problem to nature."

While this could be construed as a "jibe" at UKIP, he has a valid point. As an example of an IAS, the Red-Clawed, or American Signal Crayfish (*Pacifastacus leniusculus*) has helped devastate populations of the White-Clawed Crayfish (*Austropotamobius pallipes*) in the UK, through competition for food-sources and burrows, as well as carrying crayfish plague (ironically this species was imported to supplement Scandinavia's European Crayfish (*Astacus astacus*) fisheries which were suffering from crayfish plague, only to discover that *P. leniusculus* actually carried it). In the article the current problem with Burmese pythons in Florida is also highlighted (which the article focuses on at the beginning). While this is most certainly not applicable to the UK (but good for creating sensationalism and panic) it is a good example of the problems an IAS can cause to the environment.

One other article I will highlight is one that was distributed at the PSG meeting in July titled "Ban on Exotic Pet Markets Across the EU" - unfortunately I haven't been able to find the original article, although it has been paraphrased in a few news articles as well as being present on the APA (Animal Protection Agency) website - see link below. The article itself doesn't mention the EU IAS strategy until towards the end, but it does comprise of reports and findings which are aimed at banning exotic pet markets, such as the Doncaster and Kempton Park shows, which I know a few of our members attend. While I will refrain from inflicting my personal opinion on the readers, I will highlight the fact that the APA (as well as a few other organisations) would like to see the end of **all** animals in captivity, be they pets, part of conservation-based breeding programmes or within zoological institutions - regardless of their status in the wild. A salient point to note would be that we should all work together within the hobby to improve our knowledge and items like husbandry / welfare to give groups like the APA as little ammunition as possible.

Conclusion:

Hopefully this article has helped explain a few things about the EU IAS Strategy – as I have mentioned previously all of the documentation is publicly accessible online and the whole process is being done in the most transparent way possible (website addresses below, including other articles referenced).

References:

- [http://cbd/int](http://cbd.int) – The Convention on Biological Diversity website.
- http://ec.europa.eu/environment/nature/invasivealien/index_en.htm – The EU IAS page. There is a link to the publicly accessible documentation from here.
- http://books.google.co.uk/books?id=mJGnRlJQkC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false - "European Strategy on Invasive Alien Species"
- http://www.coe.int/t/dg4/cultureheritage/nature/bern/default_en.asp - "The Bern Convention"
- <http://www.parliament.uk/documents/post/postpn303.pdf> – Postnote: Parliamentary Office of Science and Technology – Invasive Non-native Species.
- <http://www.rochdaleonline.co.uk/news-features/2/news-headlines/71716/ukip-mep-accused-of-threatening-nature> - "UK MEP accused of threatening nature".
- <http://www.sundaymercury.net/news/midlands-news/2012/06/24/midland-boffin-slams-eu-bug-ban-66331-31247178/> - "Midland boffin slams EU bug ban".
- <http://www.apa.org.uk/press/201205-ScientificReport.html> - APA Article calling for exotic pet markets to be banned.

Cheap Stick Cages by Mike Smith

After the Summer Meeting I had more sticks to house than anticipated - but I had a little problem. I'd recently sorted out my animal shed and garage loft, and disposed of lots of pet-pal type cages that were just a tad the worse for wear. I thought at the time that if I needed new cages I could just buy some nicer new stock. Anyway, I wandered into a pet shop to buy some new pet-pal type cages and had the shock of my life! Even quite small ones were over £20 each... I'm not a skin-flint ☺ but, oh dear...surely they were not *that* expensive before. What was I to do with my spare sticks? I did not have time to make cages, or to tout around pet shops, Amazon, or the internet. Pet-pal type cages were just right, but how would I explain to my dear wife that I obtained lots of lovely sticks for *free* at the PSG Meeting – but it would cost over £100 for cages to house them.

On the way back to my car I walked past what we call "a cheap shop" (also known by others as a Pop-up or Flash Shop). These are the opportune shops that spring up on short leases in empty properties in various high streets selling bits and bobs at reasonable prices. You might well wonder if I was about to say that they sell pet-pal type cages cheap. Well, surprisingly, once years ago, I found what looked like small pet-pal cages (in fact very cheap copies) for sale in a "Pound Shop" (for one pound each, obviously). At the time I bought about 5, realising that they were ideal for nymphs. They serve me well, but I've never seen them, or bigger versions, for sale in a cheap shop since.



What this cheap shop WAS selling were storage boxes of various sizes and prices. Well, I looked at one for only £2 which was the same size as a Pet-Pal type cage I saw in the pet shop for £26. They were not perfect; they were *almost* transparent, the floor was *almost* flat, and ventilation holes *could be* added. But the *price* was perfect. I quickly bought some, took them home, and drilled some holes in their lids. I could have cut a big hole in each lid and glued some netting over them, even a piece of net curtain – but I had no netting nor net curtain, and time was short. However, I thought a very useful way to control humidity was by deciding how many holes to drill.

I've been using these cages for a while now, and they work really well; what great value for money! Also, I have very limited space in my animal shed, so cage space is at a premium. I realised that, should the need arise, I could put the cage on its end (upright, with the lid at the front), so the sticks get lots of height per cage space (provided they are not too crowded). I've not tried it yet, but it should work...so long as the lid is opened carefully.

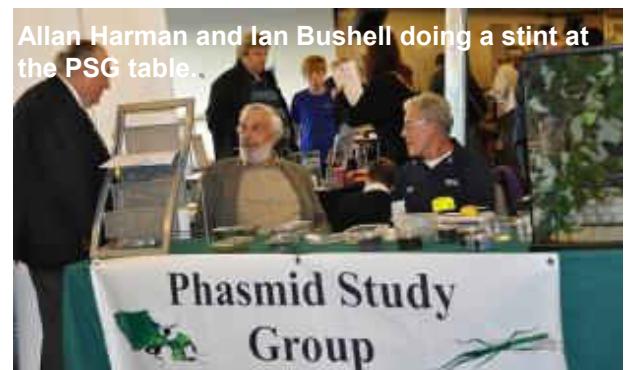
AES Exhibition, 6 October 2012 by Paul Brock & Ian Bushell

Paul: The annual Amateur Entomologists' Society (AES) Exhibition was held at Kempton Park Racecourse and the PSG's tables upstairs proved popular with the public. Several members helped out on the day and we enrolled three new members, with more having taken away membership forms. As usual, a wide range of insect dealers sold books, equipment, plants, livestock and deadstock, something for everyone. There were even a few pets on display out of their cages, such as stick insects on branches and praying mantids. The provisional date for next year's Exhibition is Saturday, 12 October 2013.

Ian: As far as I know we had three new members sign up and pay, but there were many who took away application forms or said they would go on to the web site and perhaps join via that. Certainly a fair whack – about £80.00 - was taken in contributions for livestock given out. Re photos unfortunately I didn't take my camera. Overall it seemed to go well with many members helping to run the stand.

All photos 3 are by Helen Brock.

IF ANY MEMBER VISITS ANY SHOW, PLEASE CONSIDER WRITING A REPORT AND TAKING PHOTOS FOR THE NEWSLETTER.



'Monster' Australian Stick Insect Emerges by Sam Davies

Australian Insect Farm co-founder Jack Hasenpusch discovered a tiny egg in leaf litter near Kuranda on the Atherton Tablelands earlier this year. The egg took five months to hatch revealing a female *Ctenomorpha gargantua* which Mr Hasenpusch says could eventually grow to be 60 centimetres long. If it does, it will surpass the *Phobaeticus chani*, also known as Chan's megastick, found in Borneo and measuring 56.7 centimetres in length. Mr Hasenpusch says the *Ctenomorpha gargantua* - which has been sighted on only a handful of occasions - leads a 'secret life'.



"They're very rarely seen as a species," he said. "There must be multitudes of them up there in the canopies but when you look at how high it is, how dense it is, and the diversity of trees, unless you're up there like a bird searching for these things you won't find them." Finding a female is particularly important, Mr Hasenpusch says, because most female stick insects are parthenogenetic, meaning they can reproduce without a male. "It means we can keep it going with our breeding and make it readily available for schools, universities and as pets so people can say, 'Wow. I've got the biggest insect in Australia,'" he said.

Mr Hasenpusch works alongside his wife Sue at The Australian Insect Farm, just north of Innisfail. She says that while the find won't make them rich, the sense of accomplishment in finally finding the stick insect is very rewarding. "I don't think it's going to make us millionaires," she said. "But the thing is that's all it takes sometimes when you research insects is just that one specimen, particularly if it's female, you can research and breed it then we know more about what we have out in the wild."

Having found the *Ctenomorpha gargantua* Mr Hasenpusch says he'll be on the lookout for something even bigger now. "It's a significant find in that it is Australia's largest stick insect and it makes you wonder is there another even larger one out there, whether it's on Cape York or the Atherton Tablelands," he said. "Who knows?" The insect is expected to be fully grown by January.

Ref: <http://www.abc.net.au/local/videos/2012/09/28/3600117.htm> See the video. (Thanks to Paul Brock for drawing this article to our attention.)

Stick Talk is e-mailed to around 640 subscribers in over 40 countries worldwide and is a list dedicated to stick insects: queries, answers, information, etc. As a Stick Talk list member, you will receive a short e-mail every few days. The Stick Talk list is totally independent of the PSG, though many Stick Talk list members are also members of the PSG. If you want to join the list, visit the website: www.sticktalk.com and click on "Join". It's totally free of charge; and if you do not like it, just send an e-mail asking to be taken off the list. It is also moderated; so it's secure, safe from bad language, and there will be no spam.



Puzzle

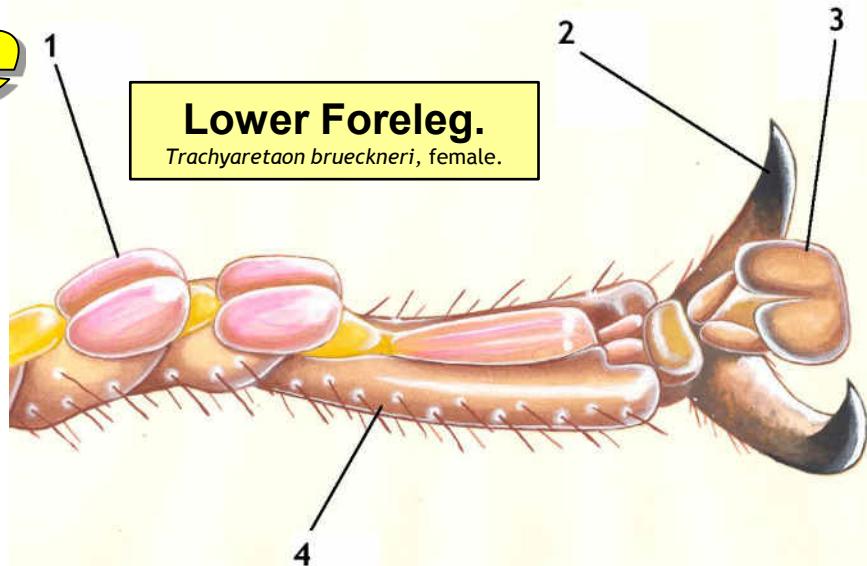
By Andrew Selwood

*This is another hard one;
can you name these four
body parts?*

What are they called?

- 1.
- 2.
- 3.
- 4.

(Answers on Page 24).



Please send in crosswords, quizzes, wordsearches, etc, for future Newsletters.

THE DEVELOPMENT OF THE PHASMID SPECIES LIST

Part Four: PSG No.151 – PSG No.200

by A.J.E.Harman (PSG.189)

PSG No.151 Valid name: *Asceles margaritatus* Redtenbacher, 1908
Country of origin: East Malaysia, Sabah. The culture was reared from specimens collected by Phil Bragg and Peter Inglis in July 1992 at Mount Kinabalu National Park at an altitude of 1500 m. A second culture was collected by Mark Bushell in 2001.

PSG No.152 Valid name: "Phanocloidea nodulosa (Redtenbacher, 1908)" Country of origin: Venezuela. The culture was reared from specimens collected by me and Mary Salton on the River Parucito, Amazonas Province in August 1992. The species was identified by Oliver Zompro though this was apparently a mis-identification and the species is being re-described. This culture is now lost. A second culture has been established but I have no details of its origin nor have I any specimens. Originally **Bacteria**, transferred to **Phanocloidea** by Zompro in 2001.

PSG No.153 Valid name: *Ramulus siamensis* (Brunner, 1907)
Country of origin: Thailand. The culture was established from specimens collected by Didier Mottaz in Chiang Mai, Thailand. Originally **Clitumnus**, transferred to **Baculum** by Potvin in 1995, and to **Ramulus** by Brock in 2003.

PSG No.154 Valid name: *Acrophylla titan* (Macleay, 1827)
Country of origin: Australia. The culture was established from eggs received from Tony Hillier in 1992. A second culture was reared from specimens collected by Paul Brock at Deception Bay, Queensland in March 1993. Originally **Phasma**, transferred to **Diura** by Gray in 1833 and to **Acrophylla** in 1835; to **Cyphocrania** by Burmeister, 1838 and back to **Acrophylla** by Serville [1838]; listed as **Phasma (Cyphocrania)** by de Haan, 1842, then back to **Acrophylla** Kirby, 1904(a), to **Vetilia** by Redtenbacher in 1908, and finally back to **Acrophylla** by Key, 1960.

PSG No.155 Valid name: *Anchiale austrotessulata* Brock & Hasenpusch, 2007 Country of origin: Australia. The culture was established from specimens collected by Paul Brock in 1993. Originally known as **Ctenomorphodes tessulata** (Gray), it was transferred to **Anchiale** by Brock & Hasenpusch, 2007 when it became a junior homonym of **Anchiale tessulata** (Goeze, 1778) and required a new name.

PSG No.156 Valid name: *Bacillus atticus atticus* Brunner, 1882
Country of origin: Greece. The culture was established from specimens collected by Paul Brock in Vouliagmeni (20km south of Athens) in 1991.

PSG No.157 Valid name: *Ramulus sp.*
Country of origin: Vietnam. The culture was established from specimens collected at Cuc Phuong National Park, Nho Quan District, Ninh Binh Province and passed to Peter Heusi in 1993.

PSG No.158 Valid name: *Ramulus impigrus* (Brunner, 1907)
Country of origin: Vietnam. The culture was established from the same source as PSG No.157. Originally **Cuniculina**, transferred to **Baculum** by Günther, 1935, and to **Ramulus** by Otte & Brock, 2005.

PSG No.159 Valid name: *Ramulus anceps* (Brunner, 1907)
Country of origin: Vietnam. The culture was established from the same source as PSG No.157. Originally **Cuniculina**, transferred to **Baculum** by Hausleithner, 1986, and to **Ramulus** by Otte & Brock, 2005.

PSG No.160 Valid name: *Trachythorax maculicollis* (Westwood, 1848) Countries of origin: Burma and Thailand. The initial culture was established by R.Westhalt in 1983. A further culture was established from specimens from Thailand. Originally **Phasma (Necroscia)**, upgraded to **Necroscia** by Westwood, 1859, transferred to **Calvisia** by Kirby, 1904(a), and to **Trachythorax** by Redtenbacher, 1908.

PSG No.161 Valid name: *Phenacephorus sepilokensis* Bragg, 1994 Country of Origin: East Malaysia, Sabah. The initial culture was established from specimens collected by Phil Bragg, Peter Inglis and Chan Chew Lun at Sepilok near Sandakan in 1992.

PSG No.162 Valid name: *Phenacephorus auriculatus* (Brunner, 1907) Country of Origin: Brunei. The culture was established from specimens collected by Phil Bragg in November, 1994. Originally **Prisomera**, transferred to **Lonchodes** by Günther, 1932(c), and to **Phenacephorus** by Brock, 1998(a).

PSG No.163 Valid name: *Sipyloidea larryi* Brock & Hasenpusch, 2007 Country of origin: Australia. The culture was established from specimens collected by Phil Bragg in Cairns, north-east Queensland October, 1994 and is widely reared via populations from elsewhere in north-east Queensland, including Garradunga, near Innisfail.

PSG No.164 Valid name: *Parapachymorpha spiniger* (Brunner, 1907) Countries of origin: Thailand, Vietnam and Laos. The original culture was established from specimens collected in Thailand by R.Westhalt in 1993. A second culture was established from Cuc Phuong National Park in Vietnam by Peter Heusi in 1998. A third culture was established by me and Mary Salton from Luang Prabang Province, Laos in August, 2002. Originally **Clitumnus**, transferred to **Parapachymorpha** by Brock, 2003.

PSG No.165 Valid name: *Hoploclonia abercrombiei* Bragg, 1995 Country of origin: East Malaysia, Sarawak. The original culture was established from specimens collected by Ian Abercrombie and Phil Bragg at Niah National Park in October, 1994.

PSG No.166 Valid name: *Dinophasma saginatum* (Redtenbacher, 1906) Country of origin: East Malaysia, Sarawak. The culture was established from specimens collected by Phil Bragg and Ian Abercrombie in October, 1994. Originally **Dina**, transferred to **Dinophasma** by Brock, 1998.

PSG No.167 Valid name: *Hermarchus novaebritanniae* (Wood-Mason, 1877) Country of origin: Fiji. The culture was established from specimens collected by Tony and Pat James. Originally **Phibalosoma**, transferred to **Hermarchus** by Kirby, 1904(a).

PSG No.168 Valid name: *Clonistria bartholomaea* Stål, 1875 Country of origin: Grenada Island. The culture was established from specimens collected by Tony and Pat James.

PSG No.169 Valid name: *Mnesilochus capreolus* Stål, 1877 Country of origin: Philippines, Luzon Island. The culture was established from specimens collected by Oliver Zompro at Talisay Bitangas between February and March, 1993. Initially mis-identified as **Lonchodes mindanaensis**. Originally **Mnesilochus**, transferred to **Carausius** by Brunner, 1907, back to **Mnesilochus** by Sjöstedt, 1933, **Carausius** by Otte & Brock, 2005 and then back to **Mnesilochus** by Hennemann & Conle, 2007.

PSG No.170 *Valid name: Phanocloidea muricata* (Burmeister, 1838) Countries of origin: French Guiana and Brazil. The original culture was established from specimens collected by members of the French Phasmid Group at various localities between 1992 and 1993. A second culture was established by Frank Hennemann and Oskar Conle from the Cayenne region in September 2001. A third culture was established from a single female collected by me and Mary Salton in at Rio Prato da Eva in Amazonas, Brazil in August, 2003. Originally **Bacteria**, transferred to **Dyme** by Kirby, 1904(a), back to **Bacteria** by Redtenbacher, 1908, and to **Phanocloidea** by Zompro, 2001(b).

PSG No.171 *Valid name: Rhynchacris ornata* Redtenbacher, 1908 Country of origin: Costa Rica. The culture was established by Dieter Schulten of Lobbecke Zoo, Düsseldorf from specimens collected near Limon in October, 1993.

PSG No.172 *Valid name: Bacillus grandii grandii* Nascetti & Bullini, 1981 Country of origin: Sicily, Italy. The culture was established from specimens collected and reared by Professor Valerio Scali and passed on to Paul Brock.

PSG No.173 *Valid name: Neohirasea maerens* (Brunner, 1907) Country of origin: Vietnam. The culture was established from specimens collected at Cuc Phuong National Park via Peter Heusi in 1996. Originally **Menexenus**, transferred to **Neohirasea** by Hausleithner, 1992.

PSG No.174 *Valid name: Lopaphus sphalerus* (Redtenbacher, 1908) Country of origin: Vietnam. The culture was established from specimens collected at Cuc Phuong National Park via Peter Heusi in 1996. Originally **Cercophylla**, transferred to **Lopaphus** by Hennemann, 1998.

PSG No.175 *Valid name: Diesbachia tamyris* (Westwood, 1859) Country of origin: Indonesia, Sumatra. The culture was established from specimens collected by Bernd Keiler at Lake Toba, Saribudolok in July, 1992. Originally **Cyphocrania**, transferred to **Sosibia** by Kirby, 1904(b), and to **Diesbachia** by Redtenbacher, 1908.

PSG No.176 *Valid name: Lonchodes geniculatus* Gray, 1835 Country of origin: Singapore. The culture was established from specimens collected by Frank Hennemann and Francis Seow-Choen in August, 1994. Originally **Lonchodes**, transferred to **Staelonchodes** by Kirby, 1904(a), and back to **Lonchodes** by Brunner, 1907.

PSG No.177 *Valid name: Haaniella saussurei* Kirby, 1904 Country of origin: East Malaysia, Sarawak. The culture was established from specimens collected by Phil Bragg and Ian Abercrombie from Tarum in November, 1994.

PSG No.178 *Valid name: Clonistria sp.* Country of origin: St. Lucia Island. The culture was established from specimens collected by Tony and Pat James.

PSG No.179 *Valid name: Clonaria fritzschei* (Zompro, 2000) Country of origin: Thailand. The culture was established from specimens collected by Barry Clarke between Pattaya Town and the border with Cambodia in November 1995. A further culture was established from specimens collected by Ingo Fritzsche in the Nakhon Ratchasima region between September 1997 and January 1998. Originally **Gratidia**, transferred to **Clonaria** by Otte & Brock, 2005 [in PSF, Scrutiny by Brock, 2008: Does not belong in Clonaria. Probably Sceptrophasma]. **PSG No.180** *Valid name: Stheneboea malaya* (Stål, 1875) Country of origin: Singapore. The culture was established from specimens collected by Frank Hennemann and Francis Seow-Choen in August, 1994. Originally **Stheneboea**, transferred to **Prisomera** by Seow-Choen, Brock & Seow-En in 1994, and back to **Stheneboea** by Hennemann in 2002.

PSG No.181 *Valid name: Hermagoras cultratolobatus* (Brunner, 1907) Country of origin: Brunei. The culture was established from specimens collected by Mel Herbert in the Badas swamp forest in August, 1991. A further collection was made by Mark Bushell and Phil Bragg in 2001. A third collection was made by Ian Abercrombie and Ian Bushell at the Crocker Range, Sabah in October, 2010. Originally **Carausius**, transferred to **Lonchodes** by Bragg, 2005 and to **Hermagoras** by Hennemann & Conle, 1997.

PSG No.182 *Valid name: Oxyartes lamellatus* Kirby, 1904 Country of origin: Vietnam. The culture was established from specimens collected at Cuc Phuong National Park, Nho Quan District, Ninh Binh Province from eggs sent to Peter Heusi in 1994.

PSG No.183 *Valid name: Sceptrophasma hispidulum* (Wood-Mason, 1873) Country of origin: Andaman Islands. The culture was established from specimens collected by Tony and Pat James. Originally **Bacillus**, transferred to **Paraclitumnus** by Kirby, 1904(a) and to **Sceptrophasma** by Brock & Seow-Choen, 2000.

PSG No.184 *Unidentified* Country of origin: Andaman Islands. The culture was established from specimens collected by Tony and Pat James. Culture believed lost.

PSG No.185 *Valid name: Neohirasea sp.*

Country of origin: Vietnam. The culture was established from specimens collected by Didier Rastel in the Cuc Phuong National Park in October, 1995.

PSG No.186 *Valid name: Chondrostethus woodfordi* Kirby, 1896 Country of origin: Solomons, Guadalcanal, New Georgia and Malaita Islands. Originally this species was collected by me and Mary Salton in the Botanical Gardens, Honiara, Guadalcanal Island between the end of October and early November, 1977. This culture did not survive. A second collection was made by us at Munda, New Georgia Island in August 1996. A third culture of possibly the same species was reared from eggs imported from Malaita Island by Oskar Conle in June 2006. Originally **Chondrostethus**, transferred to **Myronides** by Brunner, 1907 and back to **Chondrostethus** by Günther, 1932(a).

PSG No.187 *Valid name: Creoxylus hagani* Redtenbacher, 1906 Country of origin: Venezuela. The culture was established from specimens collected by H. Kaplenberg in Carabobo, Bejuma in July, 1992. May be a subspecies of **Creoxylus spinosus** (Fabricius, 1775).

PSG No.188 *Valid name: Oxyartes spinipennis* Carl, 1913

Country of origin: Vietnam. The culture was established from specimens collected in the Cuc Phuong National Park, Nho Quan District, Ninh Binh Province by Peter Heusi in 1996.

PSG No.189 *Valid name: Pseudophasma acanthonotus* (Redtenbacher, 1906) Country of origin: Venezuela. The culture was established from specimens brought back by friends of Peter Heusi. Originally **Phasma**, transferred to **Pseudophasma** by Brock, 1998(a). [N.B. in PSF, Scrutiny: Brock, 2007, Judith Marshall points out the species ending is probably a noun in apposition, meaning roughly 'marked as thorny', hence is valid.]

PSG No.190 *Valid name: Phasma reinwardtii* de Haan, 1842

Country of origin: Papua New Guinea. The first culture was established from specimens imported in 1990 by Stan Pack from Bulolo, Morobe Province. A second culture was established from eggs imported from the same source by Ian Abercrombie and me. Originally **Phasma (Cyphocrania)**, upgraded to **Cyphocrania** by Redtenbacher, 1908 and back to **Phasma** by Günther, 1929.

PSG No.191 Valid name: **Urucumania borellii** (Giglio-Tos, 1897)
Country of origin: Paraguay. The culture was established from 10 eggs laid by a specimen collected by Ulrich Drechsel at Sapucay, Paraguari Department in January, 1997 and given to Frank Hennemann. Originally **Anisomorpha**, changed to

Paradoxomorpha by Giglio-Tos, 1900, transferred to **Anisomorpha** by Redtenbacher, 1906, to **Neophasma** by Conle & Hennemann, 2002 and to **Urucumania** by Zompro, 2004.

PSG No.192 Valid name: **Orestes mouhotii** (Bates, 1865)

Countries of origin: Thailand and Malaysia. The culture was established from specimens collected by Ingo Fritzsche in the Nakhon Ratchasima region. A second culture was established from specimens collected by Wim Potvin in Malaysia. Originally **Acanthoderus**, transferred to **Datames** by Stål, 1875(a), and to **Orestes** by Zompro, 2004.

PSG No.193 Valid name: **Tropidoderus childrenii** (Gray, 1833)

Country of origin: Australia. The culture was established by Christopher Seiler in the late 1990s from specimens from New South Wales. Paul Brock also had a culture in the late 1990s from specimens originating from the Brisbane area, south-east Queensland. Originally **Trigonoderus**, transferred to **Tropidoderus** by Gray, 1835.

PSG No.194 Valid name: **Rhamphophasma spinicorne** (Stål,

1875) Country of origin: Bangladesh. The culture was established from specimens collected by Nicholas Cliquennois and N. Shorubi. Originally **Entoria**, transferred to **Rhamphophasma** by Brunner, 1907.

Acknowledgements:

Grateful thanks to Ian Abercrombie, Ed Baker, Paul Brock, Ian Bushell, Mark Bushell, Ingo Fritzsche, Frank Hennemann, Judith Marshall, Kristien Rabaey, Mary Salton and Rob Simoens.

References for Part Four (for other references please see Parts One, Two and Three):

- BRAGG, P.E., 1994. A review and key to the genus *Phenacephorus* Brunner (Insecta: Phasmida: Heteronemiidae: Lonchodinae), including the description of two new species. *Zoologische Mededelingen Leiden* 68: 231-248.
- BRAGG, P.E., 1995: The phasmid genus *Hoploclonia* Stål from Borneo, including the description of two new species. *Entomologists' Monthly Magazine* 131: 25-39.
- BRAGG, P.E., 2005: A reassessment of some Bornean Lonchodinae and Aschiphasmatidae, with some lectotype designations, new synonyms and the description of two new species. *Phasmid Studies* 13 (1 & 2): 11-29.
- BRUNNER von WATTENWYL, 1882: *Prodromus der europäischen Orthopteren*. Verlag Wilhelm Engelmann, Leipzig. 1-466 pls 1-11.
- CONLE, O.V. & HENNEMANN, F.H. 2002. Revision neotropischer Phasmatodea: Die Tribus Anisomorphini sensu Bradley & Galil 1977 (Insecta, Phasmatodea, Pseudophasmatidae). *Spixiana Supplemente* 28:1-141.
- GÜNTHER, K., 1929. Die Phasmiden der Deutschen Kaiserin Augusta-Fluss-Expedition 1912/13. Ein Beitrag zur Kenntnis der Phasmidenfauna Neuguineas. *Mitteilungen aus dem Zoologischen Museum, Berlin* 14:600-747, pl. 1-7.
- GÜNTHER, K., 1932(a). Beiträge zur Systematik und Geschichte der Phasmidenfauna Ozeaniens. *Mitteilungen aus dem Zoologischen Museum, Berlin* 17:753-835.
- GÜNTHER, K., 1935. Über einige Phasmiden aus der Sammlung des Herrn Dr. C. Willemse, Eijgelshoven. *Natuurhistorisch Maandblad, Maastricht* 24:123-126 & 138-140.
- HAUSLEITHNER, B., 1986. Die Eier einiger Baculum-Arten (Phasmida). *Entomologische Zeitschrift* 96(9): 122-128.
- HENNEMANN, F.H. 1999. Phasmidensteckbrief Nr. 6. *Lopaphus sphalerus* (Redtenbacher, 1908) (PSG 174). *Arthropoda* 7(1): 19.
- HENNEMANN, F.H. 1998. Ein Beitrag zur Kenntnis der Phasmidenfauna von Sulawesi. Mit einem Katalog der bisher bekanntgewordenen Arten. *Mitteilungen des Museums für Naturkunde, Berlin, Zoologische Reihe*. 74(1): 95-128.
- HENNEMANN F.H., 2002: Notes on the Phasmatodea of Sri Lanka (Orthoptera). *Mitteilungen der Münchner Entomologischen Gesellschaft*. 92: 37-78.
- OTTE, D. & BROCK, P.D., 2005. *Phasmida Species File. Catalog of Stick and Leaf Insects of the world*. Philadelphia. 414pp.
- SEOW-CHOEN F., 2000. *An illustrated Guide to the Stick and Leaf Insects of Peninsular Malaysia and Singapore*. Natural History Publications (Borneo) Kota Kinabalu. vi + 173pp.
- SEOW-CHOEN F., BROCK P.D. & SEOW-EN I., 1994. Notes on the Stick-insect *Prisomera malaya* (Stål) (Phasmida) in Singapore with a description of the male and egg. *Malaysian Naturalist*. 48:59-65.
- SEOW-CHOEN F. & GOH Y.Y., 1999: New records of stick insects from Pulau Tioman, Peninsular Malaysia, including a description of a new species of *Abrosoma* (Phasmida: Pseudophasmatidae: Aschiphasmatinae); *Raffles Bulletin of Zoology, Supplement*. 6: 263-269.
- SJÖSTEDT, Y., 1933. Orthopterentypen im Naturhistorischen Reichsmuseum zu Stockholm. 7. Phasmidae. *Arkiv för Zoologi* 25A (16): 1-10.
- STÅL, C., 1877. Orthoptera nova ex Insulis Philippinis descriptis. *Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar*. 34 (10): 33-58.
- ZOMPRO O., 1995: *Baculofractum* n.gen. eine neues Gattung der Phasmida, *Entomologische Zeitschrift* 105 (24): 160-164.
- ZOMPRO O., 2004: *Revision of the genera of the Areolatae*, including the status of *Timema* and *Agathemera* (Insecta: Phasmatodea). *Abhandlungen des Naturwissenschaftlichen Vereins in Hamburg (NF)* 37: 1- 327.

PSG No.195 Valid name: **Sungaya inexpectata** Zompro, 1996

Country of origin: Philippines, Luzon Island. The culture was established from specimens collected by Oliver Zompro in 1995.

PSG No.196 Valid name: **Baculofractum insigne** (Brunner, 1907)

Country of origin: Indonesia, Sumatra. The culture was established from specimens collected by Bernd Keiler at Lake Toba, Saribudolok in July, 1992. Originally **Carausius**, transferred to **Baculofractum** by Zompro, 1995.

PSG No.197 Valid name: **Tirachoidea siamensis** Hennemann &

Conle, 2008 Country of origin: Thailand. The culture was established from eggs imported from local insect dealers.

PSG No.198 Valid name: **Anisomorpha ferruginea** (Beauvois,

1821) Country of origin: U.S.A., Mississippi. The culture was established from eggs obtained by Oliver Zompro. Originally **Phasma**, transferred to **Anisomorpha** by Gray, 1835.

PSG No.199 Valid name: **Hoploclonia cuspidata** Redtenbacher,

1906 Country of origin: Brunei. The culture was established from specimens collected by Ian Abercrombie at Kuala Belalong in 1994.

PSG No.200 Valid name: **Lonchodes malleti** Bragg, 2001

Country of origin: East Malaysia, Sabah. The culture was established from specimens collected by Serge Mallet in 1995.

PSG Newsletter Survey Results *by Mike Smith*

Many thanks to everyone who completed the on-line survey questionnaire. The results help me and other members decide what it is that should and should not go into the Newsletter to best please our members. So far as I can see there were no bogus entries (one fear of putting the survey on the internet) and, to be honest, there were not any big surprises. Of course, if anyone has comments at any time on the Newsletter, good or bad, please feel free to let me know. Also, see my notes at the end of this article.

Q1 Did you like the Newsletter: Very much, It was OK, or It could have been better? I kid you not, 100% of the replies said "Very Much"...wow! We must be doing something right.

Q2 What percentage of it did you enjoy? 63.6% said they enjoyed 75% of the Newsletter, and 36.4% said they enjoyed 100% of it.

Q3 What would you like in future Newsletters?

A Colour Page	72.7%	Information on new books	100%
Reports on shows	90.9%	Poems on stick insects	36.4%
Diary Dates	90.9%	Humorous articles	72.7%
Reports on Meetings	90.9%	Species reports	90.9%
Reports on expeditions abroad	72.7%	Livestock updates	90.9%
Puzzles/Word Searches/Crosswords/Quizzes	54.5%	Details of newly found species	100%
Competitions with prizes	27.3%	Updates to the PSG species list	81.8%
Membership details	54.5%	A letters page	90.9%
PSG merchandise details	72.7%		

Q4 How would you like the Newsletter format to progress?

Leave it as it is	63.6%
Have 8 pages in colour at a modest increase in membership cost	36.4%
The options of "All Colour" at great expense, and "Have it A5 size"	0%

Q5 Preferred frequency of publication

2x a year	40%	3x a year	20%	4x a year	40%
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Members' Comments:

This is the second newsletter I have received and to be honest, both are of a higher standard than I would have expected. You can't please everybody all the time as they say but you have an excellent mix of articles and I hope all members will appreciate the time and efforts put in by the contributors and editor.

I look forward to reading the newsletters, but save them until I have time to read from front to back cover with no distractions.

Well done to Mike and all contributors! I didn't vote on frequency as while it would be great to receive this quality as often as you can bring it out, I don't know how you are fixed for contributors.

My only criticism is that B/W photos are very grainy but the colour photo on the front cover is superb.

I personally would be willing to pay extra for an all-colour newsletter but think we might lose memberships as a result. Quality of the black and white photos can be a bit suspect but better with them than without. Everything comes down to finance again. Considering the annual subscription fee is very modest, I think value for money is EXCELLENT. Free eggs and livestock in addition to this, nobody should be complaining, but I bet they still do!

Give members a choice of post or email to keep costs down, message sent to member when newsletter is ready to view.

I know we have Phasmid Studies but this seems to be mostly taxonomic. I would like to see even more scientific articles on say aspects of behaviour; evolution of phasmids; ecology etc. In this issue I particularly liked the Lord Howe Island story; one million years without sex and Insect Conservation. I would like to know what Olivier Béthoux is going to do with the wings ie what is the survey for?

I like it the way it is, but would not object to a fee increase for more colour if that is what others want.

Editor's notes. We tried a new printer for the March 2012 Newsletter; they cost less, and the standard was superb. Then in the June 2012 edition, the black and white photos were below standard. I will have a word with the printer about this and see if he can improve for this December issue. Paul Brock and I are often reviewing the cost of producing quality Newsletters against available funds and, taking into account what members say, we seem to have kept our members happy. We have considered the Newsletter being sent by e-mail or made available only on the website, but overwhelmingly in our last survey our members have wanted a hard copy to be posted to them. I e-mailed Dr. Olivier Béthoux to ask him more about his survey, and this was his answer: *The point of my survey is to determine primary homologies in wing venation, and a ground plan for the group. The result would provide characters supporting some groups within stick insects, and (more importantly, to my opinion) characters allowing fossil stick insects to be identified with substantial evidence. Documentation of intra-specific variability is a bonus, the aim being to better delimit fossil species (indeed intra-specific variation can also be useful to determine wing venation homologies). So, it's a big package, [which is] why I need a broad sample!*

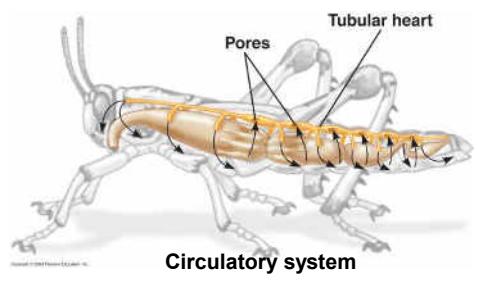
Giant Invertebrates of Movie, Myth, and Legend.

At the Summer PSG Meeting, Nick Wadham wowed us all with his talk on giant invertebrates. Nick kindly allowed me (Mike Smith) access to his slides so I could do a short article on his excellent talk.

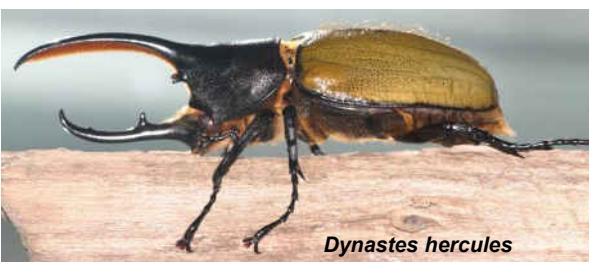
He began by saying how in the past there were the Eurypterids or giant sea scorpions, which evolved into land scorpions and other arachnid species and families. They got so big because the atmosphere was hyperoxic (high in oxygen), 30-35% compared with today's 20%, also the relative humidity and surface temperatures were higher then.

All invertebrates breathe through tubes called trachea which run through their entire bodies. To get more oxygen into the body they need a bigger internal surface, which leads to Fick's Law ie that as an organism gets bigger its volume increases by the cube of its size; whilst its surface area increases by the square of its length, so the surface area to volume ratio decreases. All very technical, but basically it proves that the monsters of movie, myth and legend are impossibilities.

Monsters of today include the *Theraphosa blondi* (Goliath Bird Eater), leg span of up to 28cm, weight up to 175g, fangs up to 2.5cm. The *Dynastes hercules* (Hercules Beetle), up to 170cm long, weight up to 100g, and it can carry 850 times its own weight. *Heteropteryx dilatata* (Jungle Nymph), at up to 18cm long it is thought to be the heaviest stick insect at around 80g. *Phobaeticus chani* (Chan's Megastick), thought to be the longest insect in the world – the Natural History Museum has one 56cm long, it comes from Borneo and lives in the jungle canopy.



Theraphosa blondi



Dynastes hercules



Heteropteryx dilatata

PROSCOPIA SCABRA by Javier Tamayo Lorenzo

Scientific Name: *Proscopia scabra* Klug. **Common Name:** "Jumping Stick" or "Horse's Head Grasshopper". **Family:** Proscopiidae. **Origin:** French Guyana. Proscopiids are Stick-like orthopterans, they are similar in appearance to walking sticks [U.S. for stick insects] and often mistaken for such. This species is active during the day time, unlike walking sticks. The conditions to keep them in are :-

Temperature: 22° to 26° C, of which they are a lot more active at 26°. Although they are not a very active insect, they can jump (remember they are orthopterans). **Humidity:** 60-70%, I keep this humidity by spraying every two days over the food. If condensation forms (normally the day when I change the food plant and the following day) I do not spray. **Substrate:** they need 5-10 cm of peatmoss to lay the eggs in. The female buries the egg clusters deep and it is better if the peatmoss is loose and not compacted, to let the nymphs emerge from the eggs, and also the female can bury the eggs easier. It is probable that this species lays the eggs in food plant stalks using its serrated ovipositor, which is what other tree living grasshoppers do since they never descend to the ground to lay their eggs. This is because the grasslands where they live are periodically flooded which would drown their eggs. However, in captivity, they do not have plants like this so they use peat to lay their eggs. The ootheca (egg case) is fragile and spongy which supports this theory, as the species which lay eggs in the soil usually have much more rigid egg cases to protect the eggs from predation and dehydration.

I keep the peat humid to ensure that the eggs don't get dehydrated, because as I have said, they do not have a solid covering. The female lays 4-6 oothecae with 30 eggs in each one. They are very fragile, so it is better to leave them where the female left them and wait for them to hatch. If you buy a pair of these insects, best to buy them at the same size in case the male dies before reproducing. The males and females of the same generation mature at the same time, even though the male has one less instar. This is unlike mantids or phasmids, where the male sometimes reaches adulthood before the female and can die before mating.

My vivarium does not have much ventilation, and it is big enough to give them adequate space. It is 50 cm (high) x 50 cm (wide) x 30 cm (deep). When they are nymphs you can have a lot of them together, but as they grow it is better to have 3 pairs in a cage as they are quite big. The eggs take 3-6 months to hatch depending on temperature, ideally the temperature should be 25° C. The males can be up to 12 cm in size and they go through 4-5 instars. The females measure between 12 and 18 cm (normally up to 16cm) and go through 5 to 6 instars. The nymphs, when they hatch, they are 1.5cm and take 6-7 months to develop. They are very hardy after the second instar. The mortality is high if there are violent temperature changes eg between 20-30 C, although it is ok if doesn't change too quickly.

The main problem I had is that if there is not enough humidity when they moult, then they have a bad moult. They do not mind a lot of light and do not hide themselves. They can eat the following food plants: Bramble, Strawberry, Rose, Mango, Hibiscus, Guava, Plantain and Pyracantha - although I only give them Bramble and Rose leaves. Winter food plants include Fire Thorn (pyracantha) and Bramble. Change food every 5 days or as needed. Some cultures have been raised on lettuce and germinated wheat. I have heard that you have to give different types of food plants to make sure not to have too many generations from too few males. The food must be mixed or the male's genitalia can degenerate and the culture could be lost. (Although I have been feeding this species only bramble in the winter without problems. With other species I have had problems with only one food source). I am sure that they would eat other food plants but as they are doing well I do not want to experiment. It is easy to sex the nymphs if you look at the head, the females have a wide smooth apex which overshoots the antennae, as for the male nymphs, it ends in a point and does not overshoot the antennae (see the photos). It is an interesting species which is worth while keeping if you like insects. It is not difficult at all to rear, it only needs high humidity when it moults, it copes with a wide range of temperatures, and it needs enough different types of fresh food.

Thanks to Doctor Alba Bentos-Pereira, specialist in the family Proscopiidae, who helped me write this article, and to David Holland and Francisco Torres, who helped translate it..

[From our archives - This article was first shown in the December 2006 PSG Newsletter]



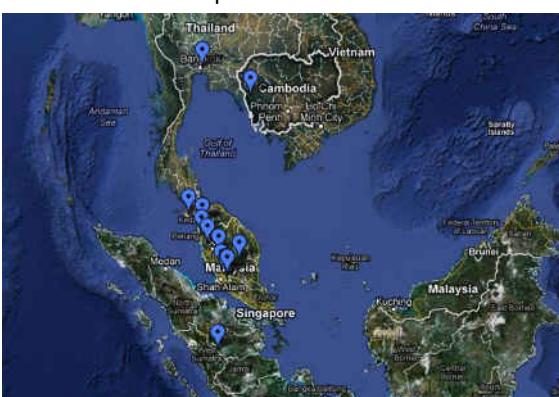
Keeping and Breeding *Necroscia annulipes* (Gray, 1835) PSG 290

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Introduction: Out of the one hundred or so phasmid species that I've kept over the years, few come close in terms of beauty, to *Necroscia annulipes*. This stunning species hails from the forests of South East Asia, and is a true delight to keep. I remember seeing pictures of this species in books before it was brought into culture, and hoping that one day I might get to keep and breed it. This chance came at the summer PSG meeting 2011, where one box of three females and a male were up for grabs. My hand was in the air before their name had even been announced, and I left very satisfied with my new additions. I was very successful in breeding this species, and as it is relatively new to culture, I thought I would pass on my experience with them in the form of this article. Sadly, I've since had to give up my culture, having now moved abroad to complete my PhD. But I hope the many boxes of nymphs I gave away enthrall fellow PSG members and I return to find this species well established.



Hatching *N. annulipes*, under microscope.



The blue pins show sites where this species is known (© Google Inc.)

Classification: Suborder: Verophasmatodea, Infraorder: Anareolatae, Family: Diapheromeridae, Subfamily: Necrosciinae, Tribe: Necrosciini, Genus: *Necroscia*, Species: *annulipes*¹. To put that into some perspective, it is most closely related to such species as *Sipyloidea* spp., *Asceles* spp., *Lopaphus* spp. etc. It has had several synonyms (alternative, now incorrect names): *Aruanoidea annulipes*, *Aruanoidea pictipes*, *Necroscia pictipes*, *Platycrana annulipes*².

Origin: the most detailed records (as far as I can find) are from Malaysia, but this species is also recorded from Lower Thailand and Sumatra³.

Description: I am going to be lazy here! In short, they are stunning. The adults are bright apple green, with black banding, yellow dots and strips. The elytra are bright blue, and the wings themselves are bright red. And as a picture can

say a thousand words, I have just put photos of the various life stages in lieu of lengthy and dull scientific adjectives; if you so wish to read these, they can be found in the book I referenced³.

Caging: the hatchlings of this species are very delicate and so require stable captive conditions. I initially kept the hatchling nymphs in a small plastic box, the bottom of which was lined with a damp paper towel. Inside this box, I placed a sprig of privet. The nymphs stayed in this box until the first moult, and were then transferred to a homemade cage, that had a moderate amount of airflow. Again, this was lined with a damp paper towel. Once the insects outgrew this cage, they were moved to a large plastic fish tank with a damp paper towel base and plastic grid lid.

Temperature and Humidity: I was lucky enough to have access to a controlled temperate/humidity room, which I suspect is why I had very little mortality in the hatchling stage. This was set at 24° C and 60-70% humidity, with a 12/12hr light/dark cycle. There was also a small fan to prevent the air becoming stagnant, and I feel that in addition to high humidity, this species requires good ventilation as well. Once out of the CT room, I heavily misted the insects every night and they seem to enjoy drinking quite a lot. This was sufficient to keep up the levels of humidity, despite using fairly airy cages.

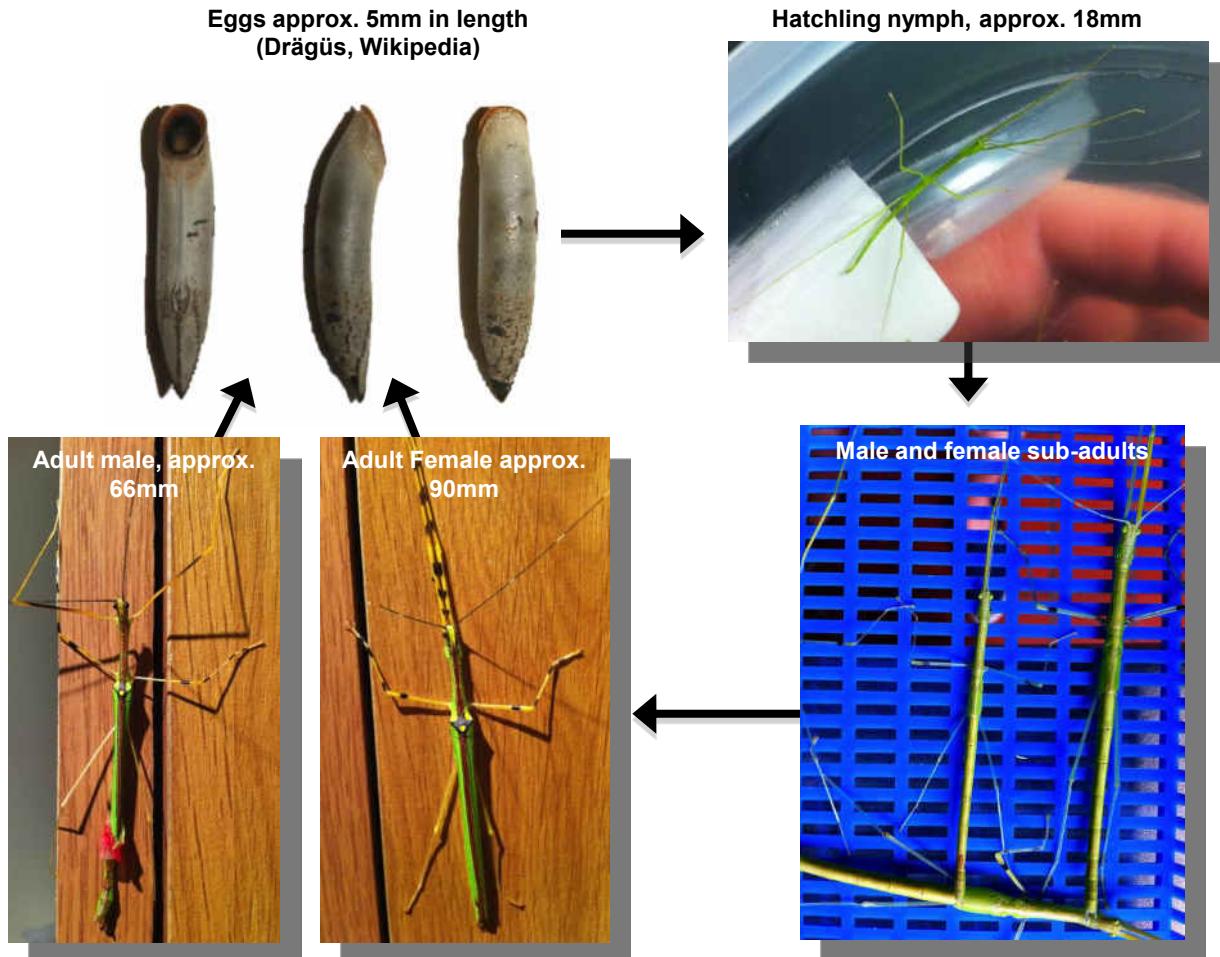
Food Plants: the primary food plant is Privet *Ligustrum vulgare* and should always be available. However, their diet can be supplemented with *Osmanthus x burkwoodii* and Lilac, *Syringa vulgaris*¹. In the wild, they are reported to eat *Olea brachiatia*, a relative of the Olive tree.³

Breeding: this species is dioecious and does not (as far as I am aware) reproduce parthenogenetically. Mating is secretive, taking place at night and is unlikely to be observed. In the wild, this species lays its eggs into plant stems (note the pointed tip of the eggs) and so need a suitable artificial substitute in captivity. I provided the adult females with a piece of Styrofoam, into which they readily deposited their eggs. This is an unusual behaviour to observe, as the females actively 'hammer' their eggs into the substrate, and with such gusto the behaviour can be heard as a rapid tapping, from another room in the house.



Sub-adult female taking a drink. Note the bulging wing buds; an indication moulting is imminent.

For incubation, the entire piece of Styrofoam can be placed into a plastic box, with a damp paper towel substrate. Eggs hatch after approximately 6-7 months, and I found slightly increasing the temperature induced hatching.



Behaviour: by day this species likes to rest in the typical ‘stick-like’ fashion seen in the majority of species, usually in the corners of the cages. Interestingly, this species never rests on the food plant, behaviour also reported by Ed Baker. When disturbed, the nymphs and adults will spasm in attempt to avoid being picked up. They are quite fast, and will run until they find a corner or dark area to re-enter the stick position. Adult *N.annulipes* fly extremely well, especially the males, which resemble a butterfly in flight. They are able to cover quite long distances and remain in flight for several minutes. The females are less mobile, and generally flutter a short distance before landing. The bright colour of the wings is thought to be a form of defence, with the sudden flash of a warning colour startling potential predators long enough for the phasmid to escape. As with most privet feeders, the nymphs and adults can also spray a defensive chemical, which does not have a strong odour but one may feel the liquid being discharged against the skin. It is generally assumed that ‘spraying’ phasmids obtain noxious chemicals from the plants they feed on, and I expect the bright colours of this species may serve as a warning to potential predators that it is not very tasty. Nymphs are also prone to leg removal (autotomy), and so handling should be minimal and infrequent.



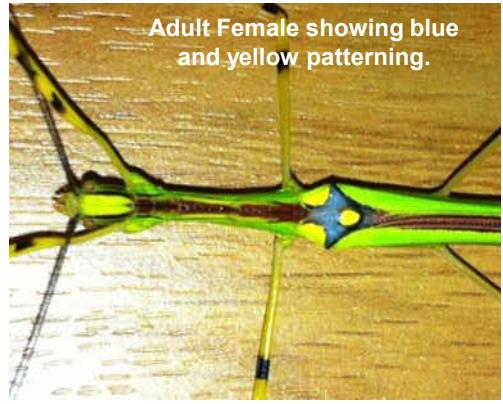
Adult male with deformed wing.

Problems: generally, this species was easy to keep. There was some mortality before adulthood, though the adults themselves seem quite robust. I only encountered a few problems with adult males (never females) failing to expand their wings fully after mating (see picture), but increasing the amount of water spraying solved the issue.

Similar Species: I expect many species could be kept under these conditions, and I used to keep a number of *Pseudophasma* species in more or less the same way. As far as I am aware, there is no other *Necroscia* sp. in culture, but species in the related group of Necrociinae species are.

Further comments: Chris Mann also breeds this species with ease, and provided the following comments on how he does so: “I keep this species in an Exo-Terra with fellow Privet eaters *Neophasma subapterum* & *Peruphasma schultei*. The foam background that comes with the Exo Terra is used by the *Necroscia annulipes* to hammer their eggs into. I leave them to hatch in situ, spraying the cage very seldom - maybe 3 times a week & I am basically over-run with them under these conditions! Unfortunately I understand the nymphs don't travel well in the post, being very delicate, which I guess is stopping this species becoming more widespread in culture.”

Conclusions: generally, if a species can fly, the chances of successful culturing drop dramatically⁴. Flying phasmids can disperse more easily to find specific food plants, and are often accompanied by defensive chemical sprays and aposematic colouration, suggesting a dependency on a specific food plant from which toxic chemical compounds are obtained. Flying insects often securely deposit their eggs onto a suitable food plant for the nymphs (i.e. *Asceles* sp. pin their eggs into the leaves; *Sipyloidea sipylos* glues its eggs into crevices), which further supports the idea that flying phasmids have a higher specificity for a certain food plant/s. However, it appears we have been lucky to find a species that will readily accept a commonly used garden plant, is generally easy to care for, and is arguably most of the most beautiful insects we currently have in culture. Therefore I really hope people do not get bored of this stunning species, once it goes out of fashion, and the effort is put in to make sure everyone can enjoy it for years to come.



References:

1. Kneubühler, B. *Necroscia annulipes* Care sheet, (2000) <<http://www.phasmatodea.com/web/guest/247>> [Visited: 5/8/2012]
2. 4D4Life. Catalogue of Life: 2012 Annual Checklist. *Necroscia annulipes*. (14/4/2010).<http://aplx5.rdg.ac.uk/annualchecklist/2009/show_species_details.php?record_id=6013762> [Visited: 9/8/2012]
3. Brock, P. D. (1999) *Stick and Leaf Insects of Peninsular Malaysia and Singapore*. Malaysia: Malaysian Nature Society.
4. Bragg, P. E. (2001) *Phasmids of Borneo*. Kota Kinabalu, Borneo: Natural History Publications.

ICZN Amendment on Electronic Publication

Following four years of highly charged debate, the rules for publication of scientific names of animals have been changed to allow electronic publications to meet the requirements of the stringent International Code of Zoological Nomenclature. In a landmark decision, the International Commission on Zoological Nomenclature (ICZN) has passed an amendment to its rules that means a publication in an electronically-only scientific journal will be 'legitimate' if it meets criteria of archiving and the publication is registered on the ICZN's official online registry, ZooBank.

The amendment establishes an *Official Register of Zoological Nomenclature* (with ZooBank as its online version), allows electronic publication after 2011 under certain conditions, and disallows publication on optical discs after 2012. The requirements for electronic publications are that the work be registered in ZooBank before it is published, that the work itself state the date of publication and contain evidence that registration has occurred, and that the ZooBank registration state both the name of an electronic archive intended to preserve the work and the ISSN or ISBN associated with the work. Registration of new scientific names and nomenclatural acts is not required. The Commission has confirmed that ZooBank is ready to handle the requirements of the amendment.

The ICZN ruling is explicit that while the publication can exist in an electronic-only format, it must still be published through a recognised scientific journal. Purely web options such as blog posts, forums, Wikimedia, Wikipedia, Scratchpads and other potentially ephemeral, unarchived web-only sources still do not qualify as legitimate publications under the new ICZN rules.

Published 4 September 2012,
submitted to Newsletter by Judith Marshall

The official amendment and brief discussion are available from:
Zootaxa : <http://www.mapress.com/zootaxa/list/2012/3450.html>
Zookeys: <http://www.pensoft.net/journals/zookeys/article/3944/>

Puzzle Answers

From Page 15

1. Euplantula.
2. Pretarsal claw.
3. Aroleum.
4. Tarsus.

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The Distribution of the UK's Naturalised Stick-insects – 2012 Update

by Malcolm Lee, Gullrock, Port Gaverne, Port Isaac, Cornwall. PL29 3SQ

Introduction: Since my last update (Lee 2009), over 300 naturalised phasmid records have been received in 56 new locations. At 30th June 2012 the UK total stands at 1,369 records in 208 locations (see appendix). Almost all recent records come via the PSG online reporting scheme set up by Ed Baker. Online reporting continues to grow, and as I finalise this paper in mid-November, I have just replied to the 206th sighting for 2012. Since it started 4½ years ago, Ed's scheme has seen the number of UK records rise from 918 to 1,540, a massive 67% increase, and has enabled the mapping of the continuing spread exhibited by our phasmids in recent years.

The Unarmed Stick-insect *Acanthoxyla inermis* has spread further into Devon, and also well into neighbouring Dorset at Bridport and Kimmeridge. There are now several plant nurseries in Devon and Cornwall that have phasmids in their grounds, or are adjacent to known sites. These nurseries will be popular with those visiting the West Country, so the spread is likely to accelerate into other parts of the UK as the stick-insect or their eggs hitch a ride on the plants to pastures new.

What else do people report online?: Apart from the naturalised species, there are reports of the occasional escaped or discarded phasmid from culture. Many are Lab-sticks, but the last 3 years have included a Thorny Stick-insect *Aretaon asperrimus* (PSG 118) from Brotton in Cleveland and another from Corby in Northants, as well as Zompro's Stick-insect *Parapachymorpha zomproi* (PSG 224) from Verwood in Dorset. The latter report arrived the same day as the first Dorset Unarmed Stick-insect record was received.

With the ubiquity of mobile phones capable of getting an image, the means of recording that surprise encounter is often to hand. Even a poor quality image can be a real boon in identifying what a non-naturalist has seen. Such 'stick-insect' reports have included the stick-like caterpillars of Thorn moths or similar, as well as the Plume Moth *Emmelina monodactyla*, or even the tiny Common Water Measurer *Hydrometra stagnorum*.

In autumn 2009 an award winning photograph taken by a schoolboy at the Arundel Wildfowl and Wetlands Trust reserve was brought to my attention. This showed a 'stick-insect' being fed to a Little Grebe chick by its mother. It was actually a Water Stick-insect *Ranatra linearis*. This May, two reports of 'stick-insects' found near water also proved to be Water Stick-insects.

Identifying the Unarmed from the Prickly Stick-insect: Surely, Prickly stick-insects have spines and the Unarmed does not, so what is the problem? If only it was always that simple. Having now received hundreds of images of our stick-insects, the variation in the number of spines of the Prickly is much wider than text books may suggest. Those 'tubercles' on the back of the Unarmed are also variable, from barely noticeable bumps to what many might regard as real 'spines'. In 99% of the cases there is no problem, but the difference between a not very spiny *A. geisovii* and an *A. inermis* with large tubercles can be taxing, particularly if you have a low resolution or poorly focused image.

These images will show the variation. Image 1 was taken by Robert Walker in his Galmpton garden, and is the prickliest specimen I have ever seen. Image 2 was taken by Chris Harvey in the garden of a friend, also in Galmpton. It was reported to the Cornwall Wildlife Trust as an Unarmed Stick-insect. At the time, this species was virtually confined to Cornwall, with a small outlier in Plymouth, and the gardens of Galmpton had long been home to the Prickly. Close scrutiny of the full resolution image revealed it did have a few small black-tipped spines. It may well have been a similar specimen in St Mawes, Cornwall which gave rise to the 1979 and 1981 reports of Unarmed stick-insects there.



Image 1: *Acanthoxyla geisovii* with many large spines



Image 2a: *Acanthoxyla geisovii* with only a few small spines



Image 2b: Close up of above image showing the spines



Image 3: *Acanthoxyla inermis* with large tubercles



Image 4: *Acanthoxyla inermis* with the typical few small tubercles

With the substantial spread of the Unarmed since 2000, it is only a matter of time before it will be confirmed at St Mawes. Two nearby reports in 2012, only a few hundred yards from the original 1959 introduction site, mentioned seeing no spines, but neither had taken an image for confirmation. Until such evidence is received, it is prudent to assume only the Prickly is at St Mawes.

Image 3 was taken in June 2012 by Dan Jarvis at the Cornish Seal Sanctuary in Gweek, near Helston. This specimen is quite thin and has the look of either a final instar nymph or a freshly moulted adult. I have noticed that more prominent tubercles can be present on nymphs, which seem to diminish with each moult. Dan was asked if he could take another picture when it was fully grown, but the decision had already been taken to release it back in the wild and he was unable to relocate it. Image 4 was of a typical specimen taken in my Port Gaverne garden.

One key feature to separate the two species on difficult specimens is the opercular spine. Most images tend to be taken from above, so this feature is rarely visible, but if it is this should confirm the species. That of the Unarmed is blunt, whereas the Prickly has a long sharply pointed spine looking like a bramble thorn.



Image 5: Opercular spines (arrowed) *A. inermis* on the left, *A. geisovii* on the right.

As I was completing this paper, I received a report from a new location at Bishopsteignton, a few miles north of Torbay where the Prickly is ubiquitous. The garden owner was certain it was an

Unarmed, but had no confirmatory image. After my reply, she found a second phasmid and sent this image which showed prickles, but fewer than on the above one from Galmpton.



Two days later the original phasmid was found and I was sent this image. When I zoomed in on the abdomen it had even fewer prickles, and they look more like small tubercles. The possibility of two separate species turning up in the same garden at a previously unrecorded location has to be very remote, and they must both be the Prickly. Had I seen this image first I may well have concluded it was the Unarmed at Bishopsteignton.



Bearing in mind that all our naturalised phasmids are the direct descendants of just a handful of parthenogenetic specimens who survived that chance journey from New Zealand, I find this wide variation quite extraordinary.

Naturalised or casuals: When casual records of non-native species are published in reports like these, some may incorrectly take this as evidence of naturalisation. I am unsure if the term 'naturalised' has ever been defined, but most would accept this to mean a self-sustaining population established outdoors over a number of years and capable of surviving occasional severe winter conditions here. This would exclude species established under glass, either in a hot house or a conservatory, and exclude species temporarily established over a spell of mild winters. On this basis, *Acanthoxyla geisovii*, *A. inermis* and *Clitarchus hookeri* are without doubt naturalised here. The position with *A. prasina* in Cornwall, *Bacillus rossius* on Tresco and *Clonopsis gallica* on Jersey is less clear, mainly because all these are recent arrivals and it is not known whether they will survive in the long term. Stick-insects have limited capacity to spread, so such new colonies will always be restricted to a small area and thus more likely to succumb to some local extinction factor. For what it is worth, my guess is that these species will remain, although with such amazing camouflage they may not be detected every year. I would add a further species, *Bacillus whitei*, which has become established in a handful of gardens at Slough since 1991 and survived the arctic winter of 2010/11.

There is no evidence that *Carausius morosus* has any capability to naturalise here, although this species is so commonly kept that reports of escapees or discards can be made just about anywhere. They may even survive outdoors for a limited time until the colder weather of autumn and winter will finish them off. Even if reports are received over a period of years, a more likely explanation for their presence is annual discards from a local enthusiast. There has been a suggestion of extended survival outdoors on two of the islands of the Isles of Scilly; Holy Vale on St Marys and on St Agnes, where discards are less likely. These are perhaps the mildest parts of the UK, but even here the winter of 2010/11 was almost as severe as on the mainland, and it seems doubtful that eggs would have survived the prolonged sub-zero temperatures. To avoid the impression that any records infer establishment outdoors, I shall no longer include details for this species in my reports.

Which colour form is most common?: When I reply to one of the online reports, I always mention that phasmids come in both brown

and green forms, and that green is the more common. The table below records the number of cases where I have actually noted the colour form shown in any image sent. This data shows no material difference between the two main species, with both having just over 60% of insects being of the green form. It is always nice to have the data to back up a statement I so casually trot out almost daily in summer and autumn.

	<i>Acanthoxyla inermis</i>		<i>Acanthoxyla geisovii</i>	
	No.	%	No.	%
Green form	151	62%	36	63%
Brown form	94	38%	21	37%
Total	245	100%	57	100%

Of course, this is not a random sample, as only those that have been seen are recorded. Colour is an integral part of camouflage and it may be that one colour form is less easy to spot, which could distort these figures. Had I been called upon to hazard a guess at the ratio of green to brown, I would have thought it much greater than around 2 to 1, so perhaps green ones are more inconspicuous.

Whilst green ones are a fairly uniform apple green, the colour forms of the brown ones are incredibly variable in the shades of brown. One found in Truro in 2007 was so dark that it was almost black.

Species Reports: A full summary of all the locations is included as an appendix to this report.

Prickly Stick-insect *Acanthoxyla geisovii* (Kaup) – PSG 80

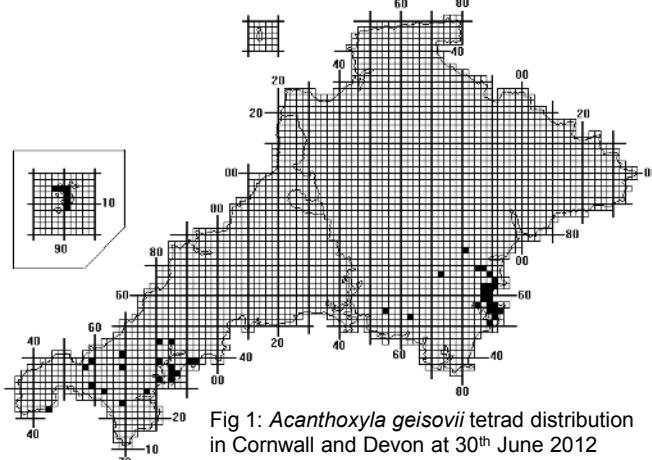


Fig 1: *Acanthoxyla geisovii* tetrad distribution in Cornwall and Devon at 30th June 2012

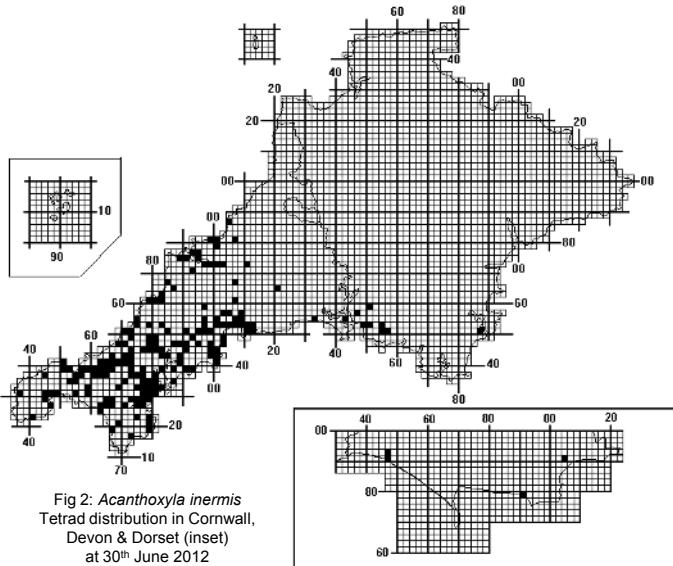
Cornwall: In August 2011 I received a report from a new location at **Tresillian**, near Truro. When I asked if any image was available, I was surprised to see it was this rarer species, rather than the widespread *A. inermis* found all around Truro. A few days later came another Tresillian report, just a few hundred yards down the road. This turned out to be *A. inermis*, and yet another example of the two main species turning up at the same location. In September 2011 came a report from a remote farm near **St Buryan** south-west of Penzance. The image sent was unfortunately slightly out of focus, but was of an unusual mottled brown form and seemed to show spines. The finder had said he noticed spines on its back, so it was accepted as this species. Brian Laney had a 2003 stick-insect sighting a few miles west of here, but the species was unknown. It was taken as *A. inermis*, as with all other phasmids recorded in the Lands End peninsula at the time. It may well turn out to be *A. geisovii*. Other confirmed sightings are at **Breage** and **Carnmellis**, both in remote locations. When checking Google Earth around these locations I came across a small nursery which backs onto a garden where both *A.*

geisovii and *A. inermis* have been present since the mid-1980s. Sales of their plants may be the source of these new reports.

Devon: New colonies have turned up outside the main Torbay area at **Coldeast** north west of Newton Abbott, in 2011, and **Buckfastleigh** about 10 miles inland from Paignton, also in 2011. The latter appears to have been the result of an accidental spillage of eggs from insects collected at Paignton. Further confirmation that stick-insects still survive around the original 1909 **Paignton** location was received in 2011 with a report from Woodland Park, off Southfield Road. This is only 100 yards from Mrs Arbuthnott's garden.

In autumn 2011 the BBC's *The One Show* had a feature on our naturalised stick-insects, with George McGavin visiting the Brixham garden of Lynda Kingston. Her kitchen window overlooks the Leylandii hedge in which they live, and in January this year Lynda made an interesting observation that she noted they always appear around 4pm in the afternoon and not before. In January this is close to the time it starts to get dark, and is confirmation of their increased activity at dusk.

Unarmed Stick-insect *Acanthoxyla inermis* Salmon – PSG 81



There have been many new locations throughout Cornwall, but the most significant feature is the eastward spread further into Devon and also Dorset.

Cornwall: In autumn 2010, the insect charity Buglife carried out 'The Great Cornish Stick-insect Hunt' asking for sighting reports. One of the discoveries of the hunt was the largest colony ever recorded, near St Austell at **Stenalees**. In a Leylandii hedge were found no less than 140 stick-insects. No doubt there were many more unseen within the dark interior, so it could well have been twice that number there. In 2011 and 2012 there were confirmed reports at **Carbis Bay** and adjacent **St Ives**. The latter location had an unconfirmed report in 1990, but this may not have been related. These later records are more likely to be part of the spread observed over the last decade.

Devon: Several new sites have appeared around Plymouth, and to the east. A report was received in September 2011 from **Dartmouth**. In the absence of a clear image it was taken as the Prickly, which is present just across the Dart in Kingswear, as well as throughout Torbay. A report in July 2012 from a garden less than 100 metres away included images confirming it was the Unarmed at this location.

Dorset: On the same day I received that Verwood report of *Parapachymorpha zomproi* there was a second Dorset report from **Bridport**, but no image had been taken. It was five weeks later, in November 2011, that I received two more Bridport reports, both of

which had taken images confirming the Unarmed was present here. Unusually, all three gardens were in different parts of the town, rather than within a 100 metres or so I would expect for reports from a new site. It may well be that they are separate introductions, or perhaps a local garden centre has a colony within its grounds. In January 2012 another report was received from the small hamlet of **Kimmeridge**, some 30 miles from Bridport, accompanied by a clear image.

Hampshire: The **Rowlands Castle** stick-insects present in 2008 and 2009 have not been seen subsequently within the garden, and the owner felt they may have succumbed to the bitter winter of 2010/11. From the many subsequent records in Devon and Cornwall, for which the 2010/11 winter was the coldest on record, *Acanthoxyla* eggs are quite capable of surviving weeks of sub-zero temperatures, so this may not have been responsible. People finding such unusual creatures often take them to a local school to show the children, but a request for sightings to the local primary school, only a few hundred metres away, has drawn a blank. For such great camouflage artists, negative results may simply mean it is still lurking unseen. I hope it may still persist here.

Acanthoxyla prasina (Westwood) – PSG 6.

Mark Hows recorded this species in the grounds of **Mount Edgcumbe** in 2011, confirming it still survives here. It has previously been recorded in Cornish gardens at Angarrack, St Mawes and Redruth, but these three sites can be traced to the accidental spillage of eggs from a culture. *A. geisovii* is also present in all three gardens, and in the event of any spread (which has certainly happened at Angarrack and Redruth), it may not be possible to separate records of a not very spiny *A. geisovii* from those of the true *A. prasina*.

Mediterranean Stick-insect, *Bacillus rossius* (Rossi) – PSG 3.

Andrew Cleave recorded this species at the **Tresco, Isles of Scilly** site in October 2010, the first confirmation of its continued presence here since 2004.

In mid-October an image was received of a *Bacillus* species at **Hayling Island**. Paul Brock visited the site the next day and found the large nymph, which he was fairly certain was *B. rossius*. It was in poor condition and would not have survived outdoors, so he removed it to breed on and confirm the species. There were local reports of phasmids from this site in previous years, and another *Bacillus* image was received which had been taken in November 2009, confirming the colony had survived that arctic 2010/11 winter.

Bacillus whitei (Nascetti & Bullini) – PSG 108.

As at summer 2012 this species is still present in **Slough**, having come through that 2010/11 winter. It has now been reported from several nearby gardens at this location for more than 20 years, and I would consider this species naturalised here.

Smooth Stick-insect, *Clitarchus hookeri* (White) – PSG 7.

They are still on **St Marys**, but I had no recent report from **Tresco** until Keith Cox sent me an image he took in October 2009 of a non-prickly stick-insect by the Great Pool. This was about 500 metres from the spot in the Abbey Gardens where *C. hookeri* had originally been found. Admirably, he had taken the image side on, which clearly showed the confirmatory absence of an opercular spine. As far as I am aware, this is the first Tresco record for this species in 15 years.

Clonopsis gallica (Charpentier) – PSG 45

Although no post 2003 records have been received, there is no reason to doubt this French phasmid still survives in **Jersey**.

Conservation Status: This table gives the statistics at 30th June 2012 to update those in Lee 2009 – [Table on next page.]

SPECIES	locations	1 km ²	tetrads	10 km ²
<i>Acanthoxyla geisovii</i>	40	73	48	20
<i>Acanthoxyla inermis (UK)</i>	146	247	174	38
<i>Acanthoxyla inermis (Ireland)</i>	10	10	9	7
<i>Acanthoxyla inermis (Total)</i>	156	257	183	45
<i>Acanthoxyla prasina</i>	4	4	4	4
<i>Bacillus rossius</i>	4	4	4	4
<i>Bacillus whitei</i>	1	1	1	1
<i>Clitarchus hookeri</i>	2	2	2	2
<i>Clonopsis gallica</i>	1	1	1	1

Acknowledgements: My thanks go to Ed Baker for setting up the online reporting system and keeping it functioning, and to Paul Brock for his unfailing assistance with identifying the more unusual discarded phasmids which turn up. Thanks also to those who took the time to contact me with their findings, without which there would be nothing to report.

References

Lee, M. 2009. A 2009 Update on the UK's Naturalised Stick-insects. *Phasmid Study Group Newsletter* 119: 15–20

Appendix – Location Summaries at June 30th 2012)

NOTE: Shaded squares represent updates from 2009 report.

Acanthoxyla geisovii locations (422 records¹)

Location	1km square	first seen	latest record	total records ¹
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CORNWALL (198 records)

Angarrack	SW 5838	1991	2011	9
Breage	SW 6228	2009	2009	1
Bryher	SV 8714	2006	2011	3
Carnmenellis	SW 6836	2011	2011	1
Falmouth	SW 8033	1998	2003	2
Feock	SW 8138	1987	2006	3
Great Work	SW 5930	c1985	2008	4
Hayle	SW 5637	2006	2006	1
Helston	SW 6528	2008	2008	1
Mawnan Smith	SW 7728	2005	2005	1
Portloe	SW 9339	2009	2011	3
Portscatho/Gerrans	SW 8735	c1996	2009	8
Redruth	SW 6941	2004	2006	2
St Buryan	SW 4423	2011	2011	1
St. Just-in-Roseland	SW 8535	1994	2011	13
	SW 8536	2006	2006	1
St. Mary's, IoS	SV 9010	c1995	2006	8
	SV 9109	2007	2007	2
	SV 9110	1997	2009	13
	SV 9112	2003	2005	2
St. Mawes	SW 8432	1974	2006	6
	SW 8433	c1959	2011	24
	SW 8532	1985	1997	2
	SW 8533	c1960	2007	15
Tresco, IoS	SV 8814	2004	2004	1
	SV 8815	c1998	2004	5
	SV 8914	pre1939	2005	24
	SV 8915	1982	2004	17
	SV 9014	2004	2004	1
Trethem	SW 8536	1997	2005	4
Tresillian	SW 8545	2011	2011	1
Truro	SW 8044	1994	2011	9
Veryan	SW 9139	pre1985	2007	10

DEVON (224 records)

Abbotskerswell	SX 8569	2007	2009	2
Brixham	SX 9054	2010	2010	4
	SX 9154	2004	2012	17
	SX 9155	c1995	2011	8
	SX 9156	2008	2008	2
	SX 9255	1986	2010	10
	SX 9355	2011	2011	1
Broadsands	SX 8856	1986	1986	1
	SX 8857	1998	2005	3
Buckfastleigh	SX 7366	2011	2012	3
Churston Ferrers	SX 9055	2004	2007	3
	SX 9056	2008	2008	1
Coldeast	SX 8175	2011	2011	1
Collaton-St-Mary	SX 8659	2012	2012	1
	SX 8660	c1940	2007	10
Ermington	SX 6352	1976	2005	9
	SX 6353	1994	2005	5
Galmpton	SX 8855	2007	2007	1
	SX 8856	c1970	2009	42
	SX 8956	1979	2010	10
Goodrington	SX 8958	2004	2004	1
Hillhead	SX 9053	2010	2011	3
Kingskerswell	SX 8768	2009	2009	1
Kingswear	SX 8850	2008	2008	1
Marldon	SX 8662	1985	2007	3
	SX 8663	2006	2006	2
Paignton	SX 8759	1982	2003	6
	SX 8760	pre1926	2009	12
	SX 8761	2009	2009	2
	SX 8859	1991	2008	11
	SX 8860	1903?	2012	13
	SX 8861	1909	2011	7
	SX 8862	2008	2009	4
	SX 8962	2008	2011	2
Plymouth - Plympton	SX 5555	2004	2012	10
Stoke Gabriel	SX 8557	1969	2005	4
Torquay	SX 8967	2011	2011	1
	SX 9063	c1930	2003	4
	SX 9064	1946	1946	1
	SX 9164	1985	1989	2

Acanthoxyla inermis locations (887 records¹)

CORNWALL (821 records)

Allet	SW 7948	2007	2007	1
	SW 8048	2010	2010	1
Angarrack	SW 5838	1998	2011	4
Blisland	SX 1072	1992	1992	1
Bodmin	SX 0667	2010	2010	1
	SX 0765	2011	2012	3
	SX 0766	2005	2005	1
Boscawen Park	SW 8343	2011	2011	1
Budock Vean	SW 7527	1988	1993	3
	SW 7627	1992	2005	9
Budock Water	SW 7731	2006	2009	2
	SW 7832	1994	2005	4
Camborne	SW 6339	2008	2008	1
	SW 6340	2008	2008	1
	SW 6439	2009	2009	2
	SW 6440	2001	2011	6
	SW 6539	2009	2011	5
	SW 6540	2007	2011	2
	SW 6541	2007	2009	4

	SW 6639	2090	2010	1
	SW 6641	2005	2007	2
Canon's Town	SW 5335	2012	2012	1
Carbis Bay	SW 5238	2011	2011	1
	SW 5239	2011	2011	1
Carnkie	SW 7134	2010	2011	2
Connor Downs	SW 5939	2003	2009	3
	SW 6039	2006	2011	3
Constantine	SW 7229	2009	2009	1
	SW 7329	1996	2008	4
	SW 7429	2007	2007	1
Coombe	SW 9551	2011	2012	2
Coverack	SW 7818	2007	2007	1
Crantock	SW 7860	2009	2009	1
Cury	SW 6821	2011	2011	1
Cury Cross Lanes	SW 6920	2007	2008	2
Dobwalls	SX 2164	2008	2009	2
Downderry	SX 3254	2005	2011	2
Falmouth	SW 7832	1994	2008	3
	SW 7931	1992	2012	13
	SW 7932	2002	2012	4
	SW 7933	1992	2012	8
	SW 8031	2011	2011	1
	SW 8032	1981	2010	26
	SW 8033	1987	2011	13
	SW 8132	2002	2007	2
	SW 8232	2012	2012	1
Feock	SW 8238	c1978	2009	9
Flushing	SW 8034	2008	2010	3
Fowey	SX 1151	2006	2010	3
	SX 1152	2005	2007	2
	SX 1251	2005	2006	2
	SX 1252	2007	2007	1
Foxhole	SW 9654	2009	2009	1
Glendurgan	SW 7727	1994	2010	3
Goldsithney	SW 5430	2001	2012	5
Goonhavern	SW 7953	2003	2010	2
Gorran Churchtown	SW 9942	2010	2010	1
Gorran Haven	SX 0041	c1969	2012	13
	SX 0141	c1965	2011	7
Grampound	SW 9348	2004	2011	2
	SW 9447	2011	2011	1
Grampound Road	SW 9150	2000	2011	29
Great Work	SW 5930	c1985	2008	7
Gulval	SW 4831	2011	2011	1
Gweek	SW 7126	2012	2012	1
Hayle	SW 5536	2005	2011	3
	SW 5537	2010	2010	1
	SW 5637	2005	2011	6
	SW 5638	2007	2008	2
	SW 5737	1999	2012	2
	SW 5738	2002	2008	5
Helford Passage	SW 7527	c1930	1993	3
	SW 7626	1994	2003	2
	SW 7627	1969	1996	3
Heligan Gardens	SW 9946	2007	2011	3
Helston	SW 6527	2003	2005	2
	SW 6528	2010	2010	1
	SW 6626	2009	2009	1
	SW 6627	2006	2007	3
	SW 6628	2009	2009	1
Hidden Valley	SX 0956	2005	2009	4
Ilogan	SW 6643	2008	2008	1
	SW 6742	2009	2009	1
	SW 6743	2012	2012	1
Kestle	SW 9945	2011	2011	1

Kuggar	SW 7216	2009	2009	1
Lanjeth	SW 9753	2012	2012	1
Lanlivery	SX 0660	2012	2012	1
Lanner	SW 7140	2011	2011	1
	SW 7239	2010	2010	1
	SW 7240	2008	2010	2
Luxulyan	SX 0557	2005	2005	1
Mabe	SW 7532	2011	2011	2
Mabe Burnthouse	SW 7634	2009	2009	1
Maenporth	SW 7828	2009	2009	1
Mawgan Porth	SW 8567	2001	2001	1
Mawnan Smith	SW 7728	1981	2011	13
	SW 7729	1994	2003	4
	SW 7828	1996	2003	2
	SW 7829	2003	2009	3
Mevagissey	SX 0044	2003	2003	1
	SX 0144	c1977	2007	11
	SX 0145	c1972	2012	14
Mount Hawke	SW 7147	2008	2012	3
Mousehole	SW 4626	2003	2003	1
Mullion	SW 6718	2009	2011	2
	SW 6719	2010	2010	1
Mylor Bridge	SW 8036	1996	2010	3
Newlyn	SW 4528	2009	2009	2
Newquay	SW 8161	2008	2011	3
	SW 8260	2009	2011	3
	SW 8362	2003	2005	2
Newton in St Martin	SW 7423	2006	2007	2
Padstow	SW 9175	2010	2010	1
Par	SX 0753	2004	2007	3
	SX 0853	2006	2010	4
Penjerrick	SW 7730	2009	2009	1
Penlee*	SW 4726	c1969	c1969	1
Penryn	SW 7733	1993	2011	8
	SW 7734	1993	2011	8
	SW 7735	1982	2009	12
	SW 7834	2005	2010	14
Pentewan	SX 0247	2011	2011	1
Penwithick	SX 0256	2005	2008	2
Penzance	SW 4531	2011	2011	1
	SW 4630	c1969	2009	9
	SW 4631	2010	2011	4
	SW 4730	2004	2009	2
Perran Downs	SW 5530	2008	2008	2
Perranarworthal	SW 7637	2005	2007	2
Perranporth	SW 7553	2006	2008	1
	SW 7554	2011	2011	1
Perranwell	SW 7739	2007	2011	2
Philleigh	SW 8739	2007	2007	1
Pityme	SW 9576	2011	2011	1
Polgooth	SW 9950	2001	2009	14
Polruan	SX 1250	2011	2012	2
Ponsanooth	SW 7537	2007	2012	2
	SW 7637	1999	1999	1
Pool	SW 6641	2006	2011	2
Porkellis	SW 6933	2007	2010	5
Port Gaverne	SX 0080	c1973	2008	17

Porthallow	SW 7923	c1987	1997	2
Porthleven	SW 6226	2011	2011	1
	SW 6325	2010	2011	2
	SW 6326	2000	2011	15
Porthtowan	SW 6947	2012	2012	1
Port Isaac	SW 9980	1987	2009	41
	SW 9981	2001	2001	2
	SX 0080	1983	2007	9
Portmellon	SX 0143	1997	2003	5
	SX 0144	1994	2008	7
Portscatho/Gerrans	SW 8735	2007	2011	3
Praze-an-beebble	SW 6336	2009	2009	1
Probus	SW 8947	2009	2011	3
	SW 9045	2009	2009	1
	SW 9047	pre1984	2011	12
Reawla	SW 6036	2007	2007	1
Redruth	SW 6841	2008	2011	2
	SW 7040	2005	2005	1
	SW 7041	2009	2009	1
	SW 7143	2008	2009	4
Reskadinnick	SW 6441	2009	2009	1
Roche	SW 9759	2003	2005	2
Rock	SW 9376	2011	2011	1
	SW 9475	2008	2008	1
Rosewarne	SW 6441	1996	2009	5
Ruan High Lanes	SW 8940	2007	2007	1
Ruan Lanhorne	SW 8942	2012	2012	1
St. Agnes	SW 7150	2008	2008	1
	SW 7249	2008	2008	1
	SW 7250	2006	2012	6
St Austell	SX 0153	2009	2009	1
	SX 0252	2007	2009	3
	SX 0253	2005	2011	7
	SX 0352	2005	2005	1
	SX 0353	2009	2009	1
	SX 0452	2001	2007	2
St Blazey	SX 0654	2006	2011	3
St. Blazey Gate	SX 0653	2003	2005	2
St. Buryan*	SW 4023	2003	2003	1
St Clement	SW 8543	2008	2008	1
St Day	SW 7242	2011	2011	1
St Erth	SW 5435	2011	2011	1
	SW 5534	2007	2007	1
St Issey	SW 9271	2011	2011	1
St Ives	SW 5039	2012	2012	1
	SW 5140	2012	2012	1
St. Just	SW 3631	2005	2011	6
St Keverne	SW 7821	2011	2012	2
St Mabyn	SX 0373	2011	2011	1
St Mawgan	SW 8765	2008	2008	1
St Teath	SX 0680	2008	2008	1
Scorrier	SW 7245	2001	2005	2
Shortlancesend	SW 7947	2009	2009	1
	SW 8047	2011	2011	4
Stenalees	SX 0055	2003	2010	3
Sticker	SW 9750	2006	2011	3
Stithians	SW 7336	2009	2009	1

Threemilestone	SW 7744	2010	2010	1
	SW 7745	2006	2009	6
	SW 7844	2000	2009	5
Torpoint	SX 4355	2007	2007	1
Townshend	SW 5832	2011	2011	1
Trebah	SW 7627	1996	2002	3
Trebetherick	SW 9277	2005	2005	1
	SW 9377	2005	2007	4
Treknow	SX 0586	2005	2005	1
Trenarren	SX 0348	2005	2007	2
Tresillian	SW 8646	2011	2011	1
Trevone	SW 8975	2004	2009	9
Trewetha	SX 0079	2007	2010	2
Trispen	SW 8450	2009	2009	1
Troon	SW 6537	2008	2008	1
Truro	SW 7944	2011	2011	1
	SW 8044	1993	2009	4
	SW 8045	1999	1999	1
	SW 8244	1993	2011	7
	SW 8245	c1920	2010	21
	SW 8344	1999	2012	8
	SW 8345	1993	2012	19
Tywardreath	SX 0754	1994	1994	2
	SX 0854	1994	2011	14
Veryan	SW 9139	2007	2012	2
Veryan Green	SW 9139	pre1983	2005	5
	SW 9239	1993	1994	2
Wadebridge	SW 9772	2011	2011	1
	SW 9972	2009	2012	2
	SX 0072	2005	2007	2
Zelah, Journey's End	SW 8353	2006	2006	1
Zennor	SW 4437	2007	2007	3

DEVON (29 records)

Brixton	SX 5452	2006	2011	4
	SX 5551	2011	2011	1
Dartmouth	SX 8651	2011	2011	1
Plymouth	SX 4756	2008	2008	1
	SX 4952	2008	2008	1
	SX 5052	2007	2007	1
	SX 5053	2000	2012	16
	SX 5152	2011	2011	1
	SX 5153	2005	2005	1
	SX 5158	2012	2012	1
Yealmpton	SX 5751	2008	2008	1

DORSET (6 records)

Bridport	SY 4691	2007	2011	2
	SY 4693	2011	2011	1
	SY 4793	2011	2011	1
Kimmeridge	SY 9179	2012	2012	1
Poole, Parkstone	SZ 0491	2006	2006	1

HAMPSHIRE (2 records)

Rowlands Castle	SU 7210	2008	2009	2
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SOMERSET (1 record)

Merriot	ST 4413	c1975	c1975	1
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SUSSEX (3 records)

Upper Beeding	TQ 1910	2003	2007	3
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IRELAND (25 records)

Ballincollig*	W 5970†	2001	2001	1
Bear Island*	V 7443†	1993	1993	1
Blackwater Bridge	V 7968	1994	2001	3
Claddananure	V 8871	1993	1994	2
Derrreen	V 7758	1965	2004	3
Derryquin	V 7064	1988	1988	2
Rossdohan	V 7163	1997	2000	3
Rossdohan Island	V 7162	1956	1993	8
Sneem	V 6966	1993	1993	1
Waterville*	V 5065†	1993	1993	1

* Unconfirmed sighting

† or nearby 1km square

***Acanthoxyla prasina* locations (10 records¹)**

Angarrack	SW 5838	1993	2006	3
Mount Edgcumbe	SX 4552	2003	2011	3
Redruth	SW 6941	1995	2003	3
St. Mawes	SW 8532	1991	1991	1

***Bacillus rossius* locations (11 records¹)**

St. Mawes	SW 8532	1991	1997	2
Tresco, IoS	SV 8915	2002	2010	6
Upper Beeding	TQ 1910	2007	2007	1
Hillingdon	TQ 0882	1987	1995	2

***Bacillus whitei* locations (6 records¹)**

Slough	SU 9581	1995	2012	6
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***Clitarchus hookeri* locations (30 records¹)**

St. Mary's, IoS	SV 9112	1999	2011	20
Tresco, IoS	SV 8914	pre1949	2009	10

***Clonopsis gallica* locations (3 records¹)**

Jersey	WV 6355	1995	2003	3
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¹ The total may include more than one record from the same site, eg. a 2001 report of a stick insect in one garden, including confirmation of their presence since 1995, with a 2003 update, will be treated as three records.

Contributions to the Newsletter. I am as always very much indebted to all the wonderful contributors to this Newsletter - many, many thanks to you all; without your sterling help there would be no Newsletter. I hope, as usual, that there is something here for everyone. **Please, would all members send in a contribution**, including any reviews on shows and meetings, drawings, photos, phasmid problems, answers to problems, crosswords, quizzes, puzzles, web site details, ideas or comments on the Newsletters or the PSG, etc, etc. *Don't worry if you can't spell, have no pictures, or think your contribution is not scientific enough.* Just send in whatever you like, this is YOUR Newsletter, and I'll put in it everything you send in – and correct any spellings and add pictures (if needed). E-mail them to: newsletter@phasmid-study-group.org, or post them to Mike Smith, 13 Runnacles Street, Silver End, Witham, Essex, CM8 3QN, England, UK. Closing date for contributions to the next PSG Newsletter in June is 22nd May 2013 (but contributions received before then are particularly well-appreciated).

Diary Dates

IMPORTANT INFORMATION ON DIARY DATES: You should check with the organisers that the event is still on, and at the times shown, before setting out. If you attend these or other shows, please send in a review for the Newsletter. If you are aware of any additional shows, exhibitions, fairs, etc, however big or small, wherever they are, if stick insects and/or other creepy crawlies are likely to be present, wherever the show may be, please pass the details on to the Editor.

PSG Summer Meeting. Saturday 6th July 2013. 11.30am, Dorothea Bate Room, Natural History Museum, Cromwell Road, London. (For more details, see June 2013 PSG Newsletter).

Royal Entomological Society Insect Festival. Sunday 7th July 2013. 10.00am – 4pm., Yorkshire Museum Gardens and Hospitium, York. (Paul Jennings would like volunteers to man the PSG stall - contact: exhibitions@phasmid-study-group.org).

Do we have your email address?

Email is becoming a more widely used method of communication and it is excellent for sending out notifications that we might otherwise not be able to get to you in time – such as an announcement before a meeting or updates we may want to share with you. We will not inundate anyone with e-mails, nor pass your information on to anyone else. There are a large number of members whose email address we don't have. If you think we might not have your email address, or if you've changed it recently, please send an email to pauldbrock@btinternet.com stating your name (and membership number if possible) so we can update our records. Thank you!

THE REAL BEHEMOTH OF HLANE ROYAL NATIONAL PARK

Leonor Fernández, Rubén Vicente, Mabel de Castro & Julio de Castro

Rua das Orquideas 48, Maputo, Mozambique (e-mail: leovilla82@hotmail.com)

The 9th June 2012 started as a nice day although the idea of travelling from Maputo to Hlane in Swaziland did not appeal to us because we knew that it was a small park and that the noise from the adjacent highway could be heard from the park. The fact that the Kruger National Park (KNP) in South Africa, our traditional bush weekend destination, has an area of 19,485 km² and it is larger than the whole of Swaziland (17,364 km²) did not boost our enthusiasm. Hlane, with its modest 220 km², seemed minute by comparison.

The fact that the KNP within reach was fully booked for that weekend and Hlane's reputation for having all large African game and 1,000-year-old hardwood trees like knobthorn (*Acacia nigrescens*), leadwood (*Combretum imberbe*) and tambuti (*Spirostachys africana*) convinced us to have a go at it. The drive to Hlane from Maputo was easy and the Goba border crossing could not have been smoother with no queues and friendly staff. It made a difference from our gateway to the KNP, Ressano Garcia where crossing is more time consuming. We got to Ndlovu Camp (ndlovu means elephant in siSwati) at midday and found a shady place for lunch, close to the camp's waterhole where half a dozen white rhinos were already there. There were mainly engaged in making themselves beautiful by means of mud and dust applications.

During our lunch rhinos continued to arrive until we counted seventeen, the largest number of rhino we have seen at a time in a waterhole. Despite its essential beauty we found them a pitiful sight when thinking that these unique giants were totally oblivious to the dusk of their species' earthly existence. We were probably looking at a substantial part of the remaining world's white rhino gene pool.

It was obvious that they all knew each other and, although we witnessed a few disagreements, they were all solved by strategic repositioning sometimes accompanied by huffing and puffing but no real fights. Long stares at close quarters and horn rubbing were the extremes allowed and, once thirst was satiated, they slowly moved off to graze and spend the night in the bush.

Stick insect in a basket, waiting to be photographed.



Lunch over, we went for a game drive until the evening. Back at Ndlovu, now romantically lit only by paraffin lamps, we enjoyed our BBQ of Swazi beef and sausages. After dinner and while cleaning up and getting ready for an early night, we heard Mabel calling us with a sense of urgency. We know she has a good eye for animals so we immediately answered her call and went to find her. She was pointing at something on the ground that looked like a small branch. Our first thought was that a twig examination could have waited until the morning. We were about to express our discontent when the stem moved and opened its small purplish wings. We were startled and moved back! After a moment of disbelief and thought we realized that it was a large stick insect and also that it was about to leave us so we grabbed it gently but fast. It was an enormous stick insect and a worthy find. We decided to keep it in a safe place for further examination and a

photographic session in the morning. With daylight we managed to examine it more carefully. It measured about 30cm—including its stretched front legs—and it was undoubtedly the largest we have ever seen.

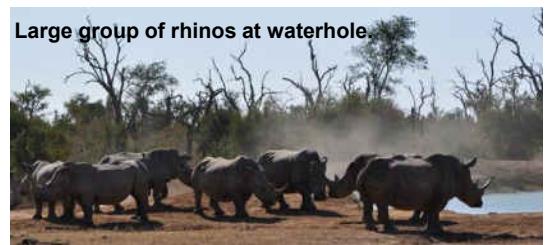
Its apparent good nature and immobility was the first thing that called our attention. We were also attracted to its very small wings, folded and almost unnoticeable. It also had small protuberances scattered all along its body, clearly mimicking twig buds. Its abdomen showed segmentation and it ended rather abruptly as it had been cut.

After our examination we decided to release it in a suitable shady spot

near where we found it, safe from predators. It remained immobile for the rest of the morning and it was still at the same spot when we left the park during early afternoon as we needed to get back to Maputo in time for a short rest before Monday's work. Clearly his strategy was to wait for nightfall to make a move.

Stick insect searches in the internet occupied what was left of Sunday afternoon after arriving back home in Maputo. We learnt that, despite their rather clumsy-looking body, some can fly. However, given a chance, they prefer to hide. The latter is not a difficult task for them as they are splendidly camouflaged. We also found out that a gigantic stick insect, *Bactrododema krugeri*, was only named in 2004 and some of us believed it matched our find. Others, however, thought that it was *Bactrododema tiaratum* so, as usual in these cases, we sought advice from the experts to settle our feud before our positions got further embattled. We e-mailed Paul Brock, from the British Museum of Natural History, responsible for the naming of *B. krugeri* and prepared to wait for his reply. To our surprise and satisfaction, he replied the following morning! He kindly referred us to his 2004 publication in

Large group of rhinos at waterhole.



The stick insect with a biro pen for size comparison.



The stick insect released and showing off its camouflage.



A close up to show details of head and thorax.



the Annals of the Transvaal Museum where the southern African stick insects have been reviewed and that he kindly attached to his reply. Most large insect species such as the one we are dealing with have been known and named for several hundred years, so Paul's discovery of *B. krugeri* as a new species so recently is a special, though unsung, event. In any case, Paul settled our dispute confirming that it was a female *B. tiaratum*. I am sure that not even seventeen rhinos at a waterhole can match the finding of such beautiful animal, the real behemoth of Hlane.

PSG 2012 Progress / Website plea for help! By Natalie Ford

In January, Mike Smith, Mike Strick, Chris Pull and I rallied together and asked to join the PSG Committee. Our motivation? Despite the amazing job done by existing committee members, membership numbers had declined somewhat and we felt the group was stagnating a little. We're each very passionate about the PSG and hoped that maybe, with a little fresh blood, we could bring the group into 21st century and revive the much-loved PSG newsletter. And with the addition of accepting Paypal payments, now having a very active Facebook page, a work-in-progress website and the fabulous newsletters Mike Smith produces, we hope we have come some way to doing that!

Last year, the membership had slipped to just 97 people, but I am delighted to say we now have 136 members – and the total seems to grow every week! Congratulations and a big *thank you* to everyone who has helped encourage new joiners and who has spread the word about the PSG – what a fantastic job you've done! We hope you will keep up the brilliant effort :-)

After we were accepted onto the Committee, Mike Smith set about reviving the newsletter and Mike Strick, Chris and I joined forces with Derek Pattenson and Nick Wadham to improve the PSG's presence online. We set ourselves two main tasks: breathe life into the old PSG Facebook page and make the website more friendly and easier to use.

We found ourselves faced with a very large task regarding the website as its current structure does not easily lend itself to the plans we have for it, so progress on this has been slow, but the Facebook page has proved a huge success and is a very lively forum with over 400 people "liking" it! See right for an example of what happens on the page – it's ideal for interacting with other Phasmid lovers; you can put up photos, seek advice about species, breeding, food plants, identifications, as well as start discussions or help other people with their questions. There are over 400 people whose knowledge you can tap into and share ideas with. Take a look! The address is: www.facebook.com/PhasmidStudyGroup

facebook.com/PhasmidStudyGroup

facebook

Search for people, places and things

Phasmid Study Group (PSG) Timeline Now

Like Liked

Mark Bushell They will also take ribbon plantain, which lasts throughout the winter. I have also used hardy varieties of Lonicera to feed them.

November 11 at 1:51pm · Like · 13 people like this.

View all 11 comments

Alan Hendy Mine do well on Licorice mixed in with their Privet during the spring and summer months; they do show a preference for the Licorice.

November 12 at 11:05am · Like · 1 person likes this.

Write a comment... Press Enter to post.

Phasmid Study Group (PSG) shared ENTOMODENIA's photo.

October 18

Hehehe, spot the stick!

Lo straordinario mimetismo di un esemplare di *Tropidoderus childreni* tra le foglie di eucalipto, in Australia. Foto David Madgley... URL: http://www.facebook.com/photo.php?fbid=54474673288531&set=a.501803273179858.136317.494718970554955&type=1&elevate_count=1&ref=nf#

Beautiful colours!

Colourful stick insect (*Orthonecroceus* sp.)

Not like the usual stick insects that I find this one doesn't seek to blend in but rather announce its presence with strong bright colours indicative of an accumulation of alkaloid toxins common ...See More

Like · Comment · Share

PLEA: Lastly, as mentioned, progress on improving the website has been very slow and we could really do with some help – do you have some spare time? You don't need to be technical, but if you can help us with research, labelling photos, categorising information, possibly typing up documents and the like, we would love to hear from you! We just aren't finding enough time to make significant progress on the website, so if you can help, please email webmaster@phasmid-study-group.org – thank you very much in advance!

David Attenborough Travels Down Under to Meet Stick Insect Back From Extinction

By Kerry McDermott

It is a familiar sight - famed naturalist and film-maker Sir David Attenborough fascinated by an animal. What makes this image remarkable is that the giant insect crawling over Sir David's hand was once believed to be extinct. The Lord Howe Island stick insect was consigned to the history books after [the introduction of] rats on the island off the coast of New South Wales, Australia, over 90 years ago.

[Over] 10 years ago a tiny colony of the insects was discovered on a cliff face on a rocky, rat-free outcrop [Ball's Pyramid] off the coast of the remote Lord Howe Island, which is located 600km east of Port Macquarie in New South Wales. In 2003 Melbourne Zoo began a breeding programme from two of those insects - named Adam and Eve - and now they have had almost 10,000 hatch at Melbourne Zoo since 2003, and they maintain a population of around 500.

The zoo's success in breeding a creature that had been on the brink of extinction attracted the attention of Sir David, 86, who [bred] stick insects as a child.

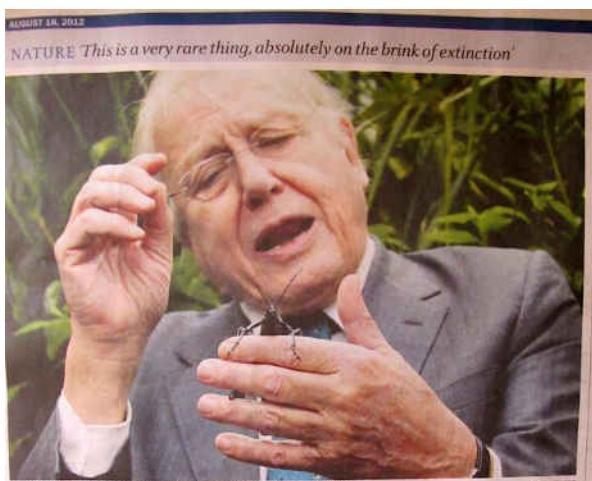


'This is a very, very rare creature absolutely on the brink of extinction,' he said. 'It is a remarkable achievement by this institution that they should have learned and discovered how to actually breed them.' In 1918 the steamship SS Makambo ran aground near the northern end of Lord Howe Island. Black rats swarmed off the boat and onto the island, spelling disaster for the Lord Howe Island stick insect as well as several of the island's endemic birds. For more than 80 years the phasmids were believed to be extinct, but in 2001 the tiny colony of surviving Lord Howe Island stick insects was discovered on Ball's Pyramid, a rocky outcrop 23km off the island that had remained rat-free. Following the success of Melbourne Zoo's breeding programme conservationists are now hoping to reintroduce the insects to Lord Howe Island.

There are now [hundreds] of the insects in captivity, but just 40 remain in the wild. 'To get them back onto Lord Howe Island would be grand, provided you can get rid of all the rats,

'Sir David said. The naturalist said the stick insect was an important part of the remote island's ecosystem. 'You don't have to look at a particular species and say that is key,' he said. 'What we're talking about is the whole complex, elaborate web of different species and ecosystems,' he said. A rat eradication programme is underway to rid Lord Howe Island of the rodents, and it is hoped the stick insects will be returned by 2015.

Ref: <http://www.dailymail.co.uk/news/article-2189827/David-Attenborough-travels-Down-Under-meet-stick-insect-extinction.html>.



This is better than a poke in the eye with a sharp stick insect for Sir David



Sir David sticks to nature

Sir David Attenborough has a way of making the mundane seem amazing – even a stick insect. Coming up reading the freight Lord Howe Island Phasmid, the rare and renowned naturalist and television star is bringing the creature back from the brink of extinction.

Poking boundaries is what Sir David, 86, who has been educating the world about animals for six decades, does best through his television documentaries. The Lord Howe Island stick insect – or phasmid – was thought to have been extinct for 100 years or more by rats that swarmed onto the island shipwreck.

After 80 years a tiny colony was discovered on Ball's Pyramid, 23km off the island and two were taken to Melbourne Zoo for breeding. It is hoped the insects will be returned to the island by 2015. Below is a photo of the eradication programme.

Sir David's stick insect breeding programme was impressive. 'You touch the web, and it pinches the flesh,' he said. 'And as our problem, because we've got to do the same thing to the insect to protect what is remaining of it.'

The Lord Howe Island Phasmid AKA: Land lobster

SIZE: Females to 12cm long; males to 10mm

FOOD: Adults feed at night, on tree leaves, mainly mulberry shrub.

STATUS: Critically endangered. Critically endangered on Lord Howe Island.

WHERE: Lord Howe Island, off the coast of New South Wales in 1918. One population of 20-30 individuals was found in 2001 on the rat-free Ball's Pyramid. In 2011, one tree was found to contain 100 phasmids.

INFO: The Lord Howe Island stick insect – or phasmid – was thought to have been extinct for 100 years or more by rats that swarmed onto the island shipwreck.

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What the Papers Say

The Lord Howe Island Stick Insect had much news coverage recently, eg both in the UK's Daily Mail (main article), and Australia's The Age (left), and The Sun Herald (above). Each had a similar story – except for David Attenborough's age which, for the record, is actually 86. If YOU see any interesting news articles on phasmids please send them to the Newsletter.

The Lord Howe Island Stick Insect, (*Dryococelus australis*). More Information. By Mike Smith

In the last PSG Newsletter, I wrote an article on the popular subject of the Lord Howe Island Stick Insect (LHISI). Chris Pull and I planned to do a follow-up article on this very popular subject. In the event, Chris was tied up with other things (eg as well as his PhD university studies, he has written an article for this Newsletter). And so I will give an update, based mainly on new information (including some exclusive photographs) kindly provided to me by David Priddel, Nicholas Carlile, and Rohan Cleave – Australian scientists key to the LHISI's breeding programme and its planned reintroduction into Lord Howe Island. I much appreciate their assistance.

Incidentally, Melbourne Zoo is celebrating its 150th Anniversary this year, and they are updating their signage at the Invertebrate Department with a big focus on the LHISI. Rohan Cleave is still working at Melbourne Zoo on the LHISI project, but Patrick Honan has left for Melbourne Museum.

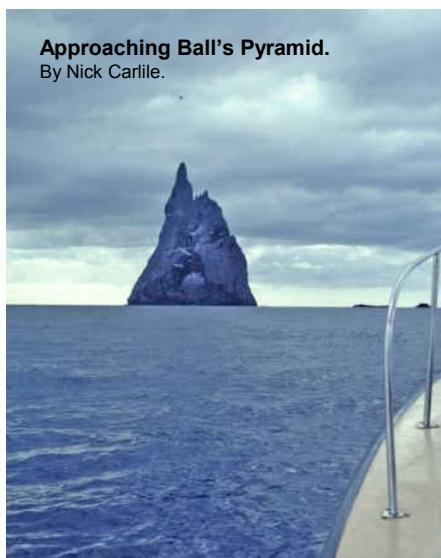
The good news is that the rodent eradication programme on Lord Howe Island has been funded – A\$9 million (£6m) - shared equally between the New South Wales and Australian governments. But much preliminary work needs to be undertaken, and the earliest that the actual eradication operation can proceed is winter 2015; and no reintroduction of the LHISI will take place before then. The process to the eradication is a long one but current planning is for the bait drop in August 2015. It is not clear yet as to whether that target will be made as the project manager needs to be appointed and the funds made available to carryout preliminary studies and captive management trials. If the baiting goes ahead as scheduled the reintroduction of phasmids to LHI would not occur until 2017 (to give time to ensure that rodents have been successfully eradicated from the island).

Sir David Attenborough went to Melbourne Zoo on 17.8.2012 specifically to see the LHISI, hear about its story, and to meet the team of keepers responsible for its care. He gave the eradication of rodents on LHI a 'thumbs-up'. This gave the whole project much positive publicity (as I showed on the previous page of this Newsletter).

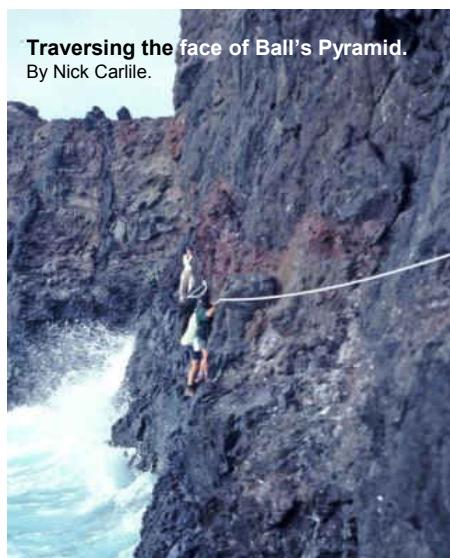
The fame of the LHISI continues to spread! The LHISI video I referred to in my previous article has had nearly 1m hits so far, and photographs have been entered by Rohan Cleave into the Australian Museum Science Photography Competition. ARKive have also made contact with Rohan, his video and some photographs are now on their website.

The LHISI is the first invertebrate in an Australian zoo to have its own ASMP species management plan. The Australian Species Management Programme - ASMP - is the species management arm of the Zoo and Aquarium Association (ZAA). Through a large network of voluntary position holders working in member zoos, the ASMP provides coordinated management and planning recommendations for species residing in ZAA's member institutions. ASMP activities are monitored and directed by the ASMP Committee. Activities fall into two main areas: strategic regional collection planning, carried out by a series of Taxon Advisory Groups, and individual species programmes (eg for conservation, population, and husbandry), coordinated by staff working in ZAA member zoos and aquaria.

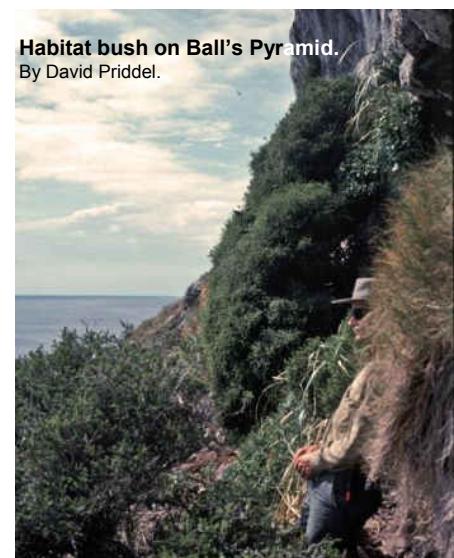
The breeding programme is going from strength to strength, with Melbourne Zoo maintaining a population of around 500 - with several hundred eggs incubating at any one time (indeed, they have thousands of eggs; but not all are incubated). On 8.3.12, 200 LHISI eggs were sent to Budapest Zoo, Hungary, to try to establish a European breeding programme. And, on 28.5.12, 99 LHISI eggs were sent to the San Diego Zoo, in USA, to try to establish an American breeding programme. Additionally, there was a programme where 25 schools around the state of Victoria (Australia), received 10 LHISI eggs each to see if they could hatch and raise them. That program is finishing at the end of this year and it has been a world's first regarding endangered species in the classroom. Some schools have done particularly well and all have got something out of the opportunity. However, everybody is finding that getting the nymphs through their instar stages is tricky eg news from San Diego and Budapest Zoos is that they have yet to successfully grow the insects to adults.



Approaching Ball's Pyramid.
By Nick Carlile.



Traversing the face of Ball's Pyramid.
By Nick Carlile.



Habitat bush on Ball's Pyramid.
By David Priddel.



First photo of LHISI
By Nick Carlile.



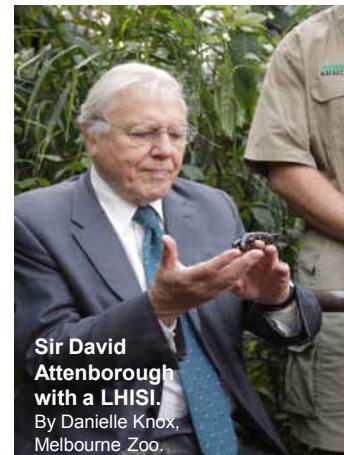
Nick Carlile &
female LHISI.
By Patrick Honan.



Australian Museum
Eureka Science
photo
By Rohan Cleave.



Pat Honan &
LHISI enclosure.
By Nick Carlile.



Sir David
Attenborough
with a LHISI.
By Danielle Knox,
Melbourne Zoo.



Photos without credits are miscellaneous pictures by Rohan Cleave.

Rohan was very interested in trying to prove whether the LHISI could breed parthenogenetically. In August 2009, he separated a female to try to confirm this. Yes they can...it has now reached the second generation of this trial, and all offspring to date have been female.

Incidentally, the small captive breeding colony housed on Lord Howe Island (see photo) is successfully breeding LHISIs. Also, a manuscript on the story of the LHISI rediscovery and recovery has been written by Australian author Rick Wilkinson who is currently looking for a publisher.

I hope you enjoy the photos!



The small captive breeding colony housed on
Lord Howe Island. By Nick Carlile.