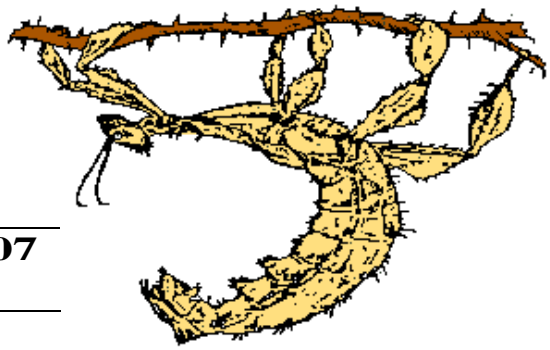
The Phasmid Study Group



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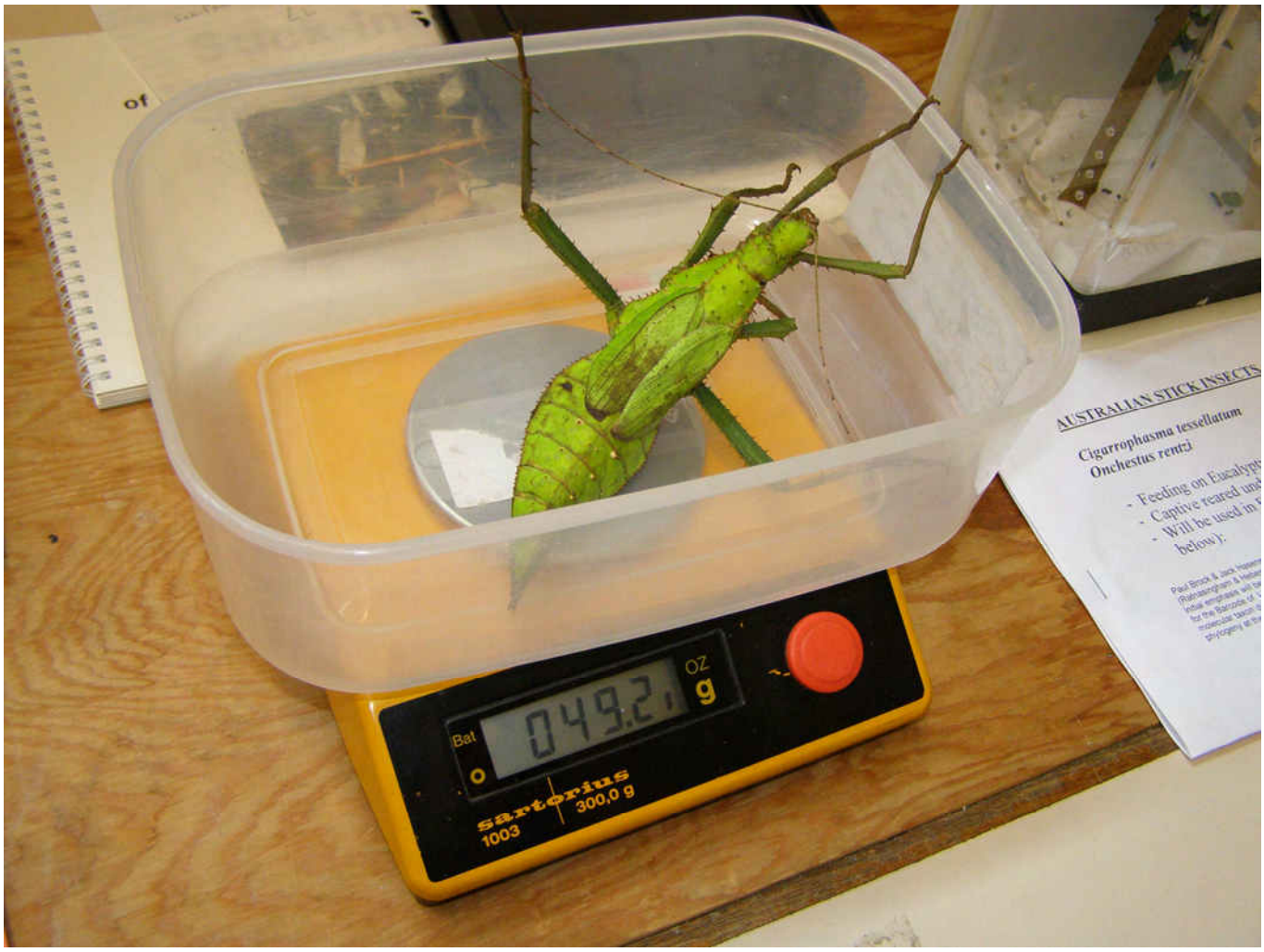

The winning entry in the 'Heaviest Heteropteryx' competition. © Ingo Fritzsche.

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Above: *Phyllium* sp. © Edward Baker
Below Left: *Pseudosermyle phalangiphora* (nymph) © Edward Baker
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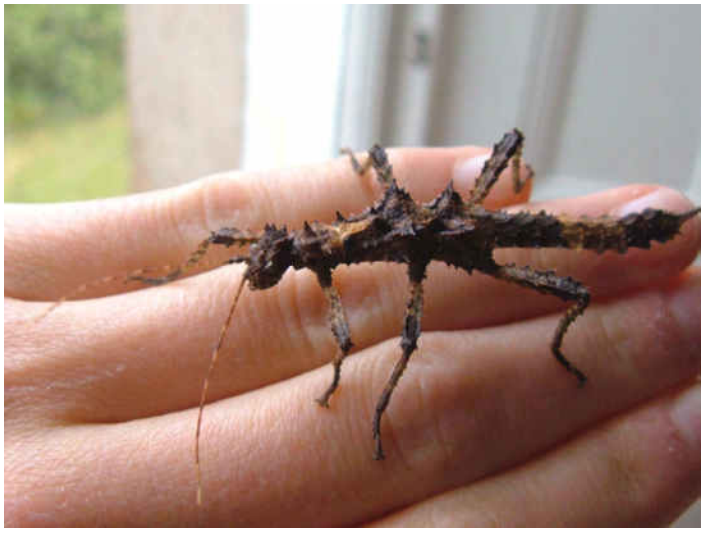


Submitting Images

Photographs and artworks are welcomed from anybody. They may be submitted to me via e-mail or by post (addresses in Committee section). Drawings should be finished in Indian or black ink for best reproduction.

News, Information & Updates

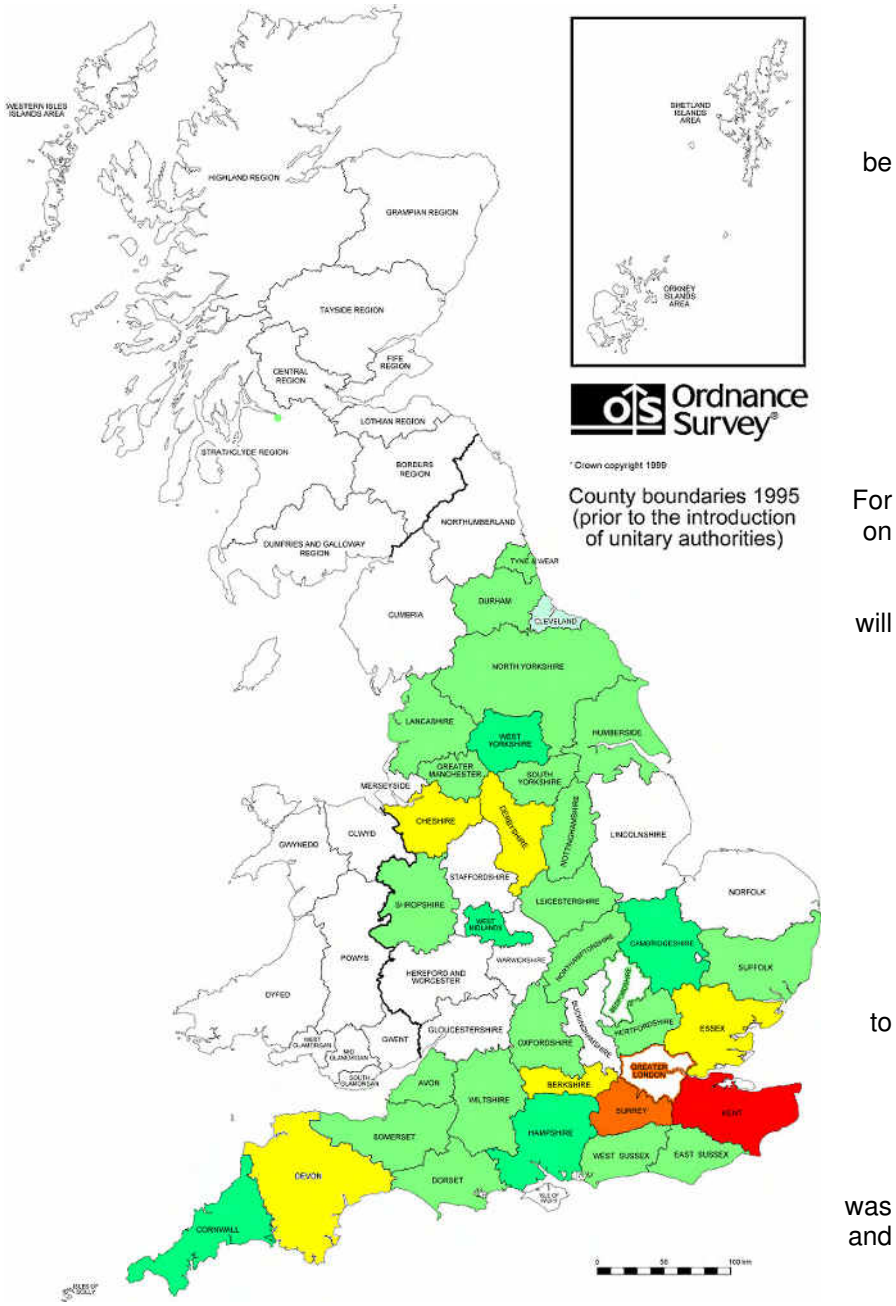
Editorial

Ed Baker (Editor)

Well the summer meeting has been and gone, and there have been a number of interesting developments following on from the discussions we had.

First is the PSG Northern Meeting (all the information can be found later on in the newsletter). This will be held at the Manchester Museum, and will hopefully be a great addition to our meetings calendar.

Before the meeting I went through the membership list and created a membership map by county for the UK membership. (There are several members missing, generally those with longer than normal addresses). I have included the map here for your reference.



Second is the forthcoming new website. For those who are interested it will be based on the same system that is being used on the Blattodea Culture Group website (www.blattodea-culture-group.org). This will allow us to make the website much more interactive, with discussion forums and making it easy for all members to contribute to the photo galleries and other areas of the site. The website will be hosted for free at the Natural History Museum as part of the European Distributed Institute of Taxonomy (EDIT) Scratchpad scheme.

Work for the website is currently revolving around collecting together information and photographs ready for inclusion. Thanks to Allan Harman for providing some photographs of original cultures and Phil Bragg for offering to upload a number of photographs.

Apologies for the lateness of this issue, it was due to several unexpected circumstances and the next issue is set to be printed on time.

Special thanks are due to Tom Low, who has been of great editorial assistance in tidying up and translating some of the articles in this issue.

Finally I would (yet again) like to ask you for your submissions. The newsletter depends on our contributions, and it would be nice to see a few new names making contributions alongside the familiar ones.

Diary Dates

All event information has been accepted as bona fide, however we recommend checking with the organisers closer to the date of the event.

7 October 2007: 40th Phasma meeting

Apologies that the newsletter was not out in time to announce this meeting. We hope that it went well.

31 October 2007: Exhibition by Phasma in Diksmuide (Belgium)

"Bewitched Diksmuide" is the subject.

There are historical walks based on the 1600s, a witch market in the Boterhalle with herbs, candles, nature products, workshops etc. Diksmuide is situated 10 km from Veurne. The exhibition will take place in the town hall in the gothic hall.

All Phasma and PSG members are welcome to give some explanation of phasmid life or just to visit. Open from 10:00 till 18:00.

Kind regards, Kristien and Rob

19 January 2007: PSG AGM & Winter Meeting

As usual this will be held in the Dorothea Bate Room at the Natural History Museum, London. A full agenda will be included in the next newsletter.

23 February 2007: BugFest South-West

Holy Trinity Church & Community Centre, Lysander Road, Yeovil 11am-3pm
Entrance will be: Families £4, Adults £3, Senior citizens & students £2

For information, please email BugfestSW@aol.com or write, enclosing SAE to: BugFest SW, Wisteria House, 32 The Crescent, Yeovil, BA20 1XW.

If you are organising or attending an event not listed here then please can you send details to the editor. Contact details are in the Committee Section.

Members Area at www.stickinsect.org.uk

Username: PSGmembers **Password:** Exmoor730

Wants & Exchange List

Janine Fletcher (Livestock Coordinator)

Surplus Ova: 14, 15, 30, 73, 126, 151, 174, 181, 182, 183, 195, 221, 224, 250, 258, 260, 265, 267, 268, 270, 272, 276, 278, Phoebaeticus (Nearchus) maximus, Pseudophasma phthisicum & Phasma reinwardtii.

Surplus Nymphs: 1, 32, 84, 103, 165, 181, 183, 195, 221, 237 & 267.

PSG Membership

The current annual subscription rate is £12 (UK), £14 (Europe) and £15 (rest of the world). If you know anybody who would like to join the group then an application form is available from Paul Brock (address above).

The Committee

Update to Culture List

Phil Bragg

PSG 280 (currently on the list as Bacteria sp.) has been identified as Phanocles ploiaria (Westwood, 1859) by Oskar Conle.

PSG "Phasmid Day": Saturday, 17.11.07

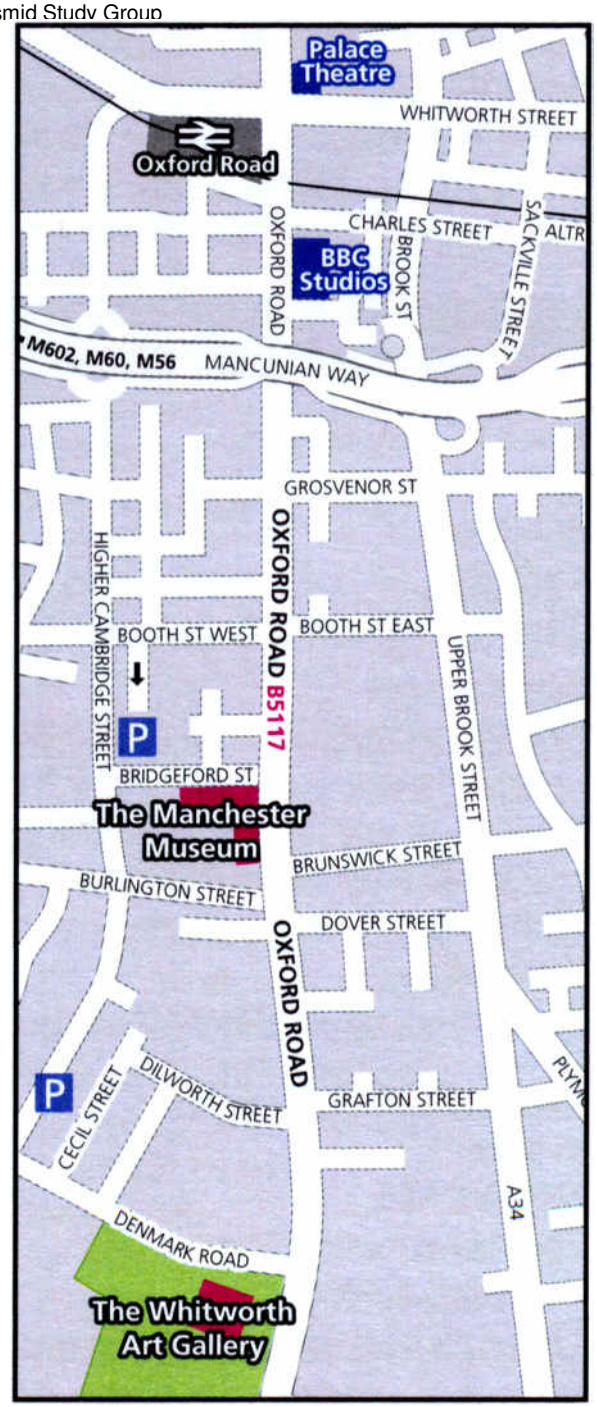
Mike Smith

GREAT NEWS!! After many requests, we are trialling a PSG "Northern" meeting on Saturday, 17th November 2007, at the Manchester Museum, England, starting at 11am and finishing at 4.00pm; the event is being advertised locally as A Phasmid Day. The meeting will be open to all PSG, Stick Talk, and Phasma members, including their friends and children. The meeting will have stands, refreshments, and a livestock exchange table. Talks will take place in a lecture theatre which will be open to the public. A public display of different species of live stick insects, photos and pictures will take place in an adjacent room. (The meeting will be "informal" – ie no committee meeting).

For those that are interested, there will also be guided tours behind the scenes to view the entomology collection; a "bring and buy" stall; and a Quiz competition. Also, you are welcome to look around the excellent museum which has free entry and, in addition to a good natural history section, it has a small vivarium exhibiting live amphibians and reptiles - and don't miss the famous mummies and the fantastic full-sized T. rex fossil.

TRAVEL. There is a big, multi-storey, public car park 5 minutes away with ample spaces - even on a Saturday - and costs only £2 for the whole day (6am to midnight). There will be a dropping off/picking up point, in the museum's limited car park, eg for those bringing exhibits. .Also there is a train station nearby, and many coaches travel to and from Manchester. For those who are travelling long distances, there are many hotels locally, but Manchester's hotels are can be expensive; those just outside Manchester generally give better value, including a Travel Lodge costing only £26 per night (look them up on the Internet). The exact location of the meeting is: The Manchester Museum, The University of Manchester, Oxford Road, Manchester, M13 9PL, England, UK. A map and directions to the museum and car park can be found at www.museum.manchester.ac.uk. If you plan to attend, please let Yvonne know so we have an idea of what numbers to expect: yvonne@buxtonhouse.free-online.co.uk.

THE MEETING. We can have a great time just joining our friends and exchanging ideas and experiences. There will be tea, coffee, and squash available and there is no objection to people bringing packed lunches, though there is an excellent museum cafe which is open from 8.30am to 6pm and sells everything from sandwiches to hot meals (there are lots of coffee/sandwich shops in Oxford Road as well). There will also be a "bring & buy" stall for stick-related goods and plants – *please bring in your spare goods and plants for this stall* (in good condition, for free or reasonably priced please, and no livestock to be sold). There will be a paper quiz for you to attempt throughout the day (by Sarah Houghton), with a prize for the winner and also a quiz for children with a prize. There will be a livestock table for your spare livestock; not only of stick insects but of any other spare critters you have (e.g. millipedes, fruit beetles, mantids, cockroaches, etc – but nothing dangerous, please). If you do bring anything in for the livestock table, they should have some foodstuff, and be labelled with your name, their name, what they are fed on, for phasmids their PSG No, and any other useful details (e.g. use Derek's label wizard at www.sticklist.com, and press the "labels" icon). Please check before you leave at the end of the meeting that all your livestock has been distributed and, if not, please take them back with you.



THE TALKS. There are a number of talks planned. Dr Dmitri V. Logunov, Curator of Arthropods, will give a welcome and introduction to the Manchester Museum, its entomological collection, and the importance of collections and taxonomy in general, his talk is entitled "A Treasure Chamber of Bugs: Behind the Scenes at the Museum". Dr Yvonne Golding will talk on camouflage and mimicry in insects, with general principles and theories, and specific examples in phasmids, her talk is entitled "Insects and the Art of Deception". We plan one or more short talks on Keeping and Rearing Phasmids. Finally, Dr Phil Bragg will give a talk entitled "Phasmid Hunting in Borneo", in which he will talk about Borneo in general, its ecology, and of course include many pictures of phasmids found there. This talk will be followed by a "Question and Answer Session" where the audience can ask Phil questions about his talk, and general questions on phasmids can be asked and answered by anyone there.

THE PHASMID DISPLAY. There will be a display of live phasmids for us and the public to view. There will also be photographic and picture displays of phasmids. Please bring in as many different species as possible for the live display, and also your best photos and pictures. Please let Cameron DK know in advance of what live species you plan to bring in, and whether or not you have a container for them cameron.diekonigin@virginmobile.com. The museum is kindly lending their facilities to us for free, so please let's put on an excellent display for their public. It is also planned that the public would be allowed to handle stick insects –if they want to! – and we plan to make spare sticks available to responsible people, as at our shows. So if you have lots of spare, easy to keep and harmless Indians, 144s, Pink Wings, AAs etc, please bring them in for this purpose.

THE TOURS. There will be guided tours behind the scenes to view the museum's entomology collection. These will be run by Dr Dmitri V. Logunov, Curator of Arthropods, and his assistant Phil Rispin. The tour will take approximately 30-40 minutes. Four tours are planned throughout the day, each taking up to 15 people. If you think you may be interested in taking part in a tour, to avoid disappointment, please let Dmitri know in advance, especially if you are interested in any particular groups of insects: Dmitri.V.Logunov@manchester.ac.uk

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IN CONCLUSION If the meeting is a success, we may run further "Northern" meetings – it is up to you – just turn up! Full details of the meeting (agenda, timings, etc), are not yet finalised, but will be available at the meeting room on the day. If you have any ideas for, or comments on, the meeting, please let me know: mikelsmith@tinyworld.co.uk.

Important Notice for Blattodea Culture Group Members

The Committee of the Blattodea Culture Group

If you have recently joined the Blattodea Culture Group (BCG) using PayPal then please note that the Membership Secretary's account is RolandDusi@aol.com NOT Roland.Dusi@aol.com as has been published previously. If you think you may be affected then sign into your PayPal account and see if the transaction is 'Payment pending' then cancel it and set up a new payment to the correct address.

BCG members may now pay by sterling, as Judith Marshall and George Beccaloni have opened a Lloyds TSB account for the group; send cheques payable to 'The BCG' to Judith or George at the NHM.

The new BCG website is now online and we would like to encourage all members to register as users, and take part in the forums, submit images to the photo galleries, and much more besides. The URL of the website is http://www.blattodea-culture-group.org.

Contents of *Phasmid Studies*

Phil Bragg (Editor of *Phasmid Studies*)

Phasmid Studies 16(1) should be available on line in September 2007. It includes the following:
Biographies of Phasmatologists – 3. Hermann Burmeister.
Biographies of Phasmatologists – 4. William Forsell Kirby.
A description of the male and egg of *Sipyloidea acutipennis* (Bates, 1865).
Book review – *Stabschrecken - Carausius, Sipyloidea & Co*. by Ingo Fritzsche.

Articles, Reviews & Submissions

PSG SUMMER MEETING, 14TH JULY 2007

Mike Smith

Rob & Judith © Ingo Fritzsche

The day before the meeting I took Anna's advice and checked with London Transport for any planned problems. (You can do so too by phoning 0207 222 1234 (44 207 222 1234 from overseas), or go to the website www.tfl.gov.uk). And I found out there were no problems due. So, after driving up the A12 to Newbury Park underground station, it was a bit of a shock to see a big chalkboard saying "14.7.07, Severe Disruption on All Lines". Anyway, as it turned out, my trains were fine for me both ways – albeit I was probably travelling on trains that were well overdue.

The main train problems were earlier in the morning, but some minor problems lingered on all day. (I had asked for the trains to behave that day – but they didn't listen; though at least the weather was not raining this time). Some tube-travelling members were delayed getting to the PSG meeting, the train problems also meant that there were even more cars on the road than usual for a Saturday, and there were lots of road works too, so people travelling to the meeting by bus, coach, or car were also held up (eg Ian told me it took him over 1 hour to do the last 2 miles to the museum in his car). The other problem was the 15-20 minute queue to get into the museum, as the security checks of bags etc seemed to take longer than usual. (Judith advises there are usually no queues at the museum's side entrance in Exhibition Road, so we could try this one in the future). Thus the meeting started quite late (but with a good eventual turn out of around 60 members) and, as I had arranged a full agenda, it was initially a bit of a struggle getting through everything. But Judith did a magnificent job of running the day, we not only covered everything but, by having a very short lunch-break, we even caught up and by 2pm were running on time.

I went with my daughter Tracey, and her friend PSG member Dale – a 10-year-old, very keen on stick insects. We arrived at the museum about 10.30am. I had things to get ready before the meeting started; Tracey and Dale did not want to walk round the museum while I did so, so they helped put a few chairs out and then did the Wordsearch Competition.

I put out name labels and spare agendas. Also the Phasmid Wordsearch competition, and 3 flyers by me on: Jungle Nymphs being the heaviest stick insect; a listing of all known Phylliidae (i.e. leaf insects); and 13 postage stamps that had stick insects on them – five of which were Phylliidae. The flyers were in colour, and very popular, with many members taking some. I still have spares so, if you want a copy of the 3 flyers and the wordsearch (competition now

closed though), please send me a stamped, self-addressed envelope (my address is at the end of this article), and I'll post them on to you.

First off was the PSG Committee Meeting, which started around 10.50am – 20 minutes late, and still with a couple of committee members struggling to arrive. We discussed the lack of progress on the updating of the PSG Website. However, Ed Baker had designed a new website for us to use in the near future, and Nick Wadham – an IT teacher – had volunteered to become our new Webmaster. Gavin Ridley, our new Merchandising Officer, had many ideas for new PSG merchandise, which will be looked into; but one problem was a possible lack of funds as Paul Brock advised us that the PSG membership numbers were going down slightly but steadily each year. We discussed the possibility of holding a PSG meeting at a northern venue, e.g. Manchester, which was offered to us by member Yvonne Golding. The idea was fairly well received, but we thought it best to try it out as an informal, third PSG meeting, around November so it did not clash with other shows. [We now know the meeting will go ahead, at Manchester Museum on 17th November 2007 – read more elsewhere in this Newsletter.] Anyway, all the items covered were taken away by various committee members to delve into and see what would be viable, affordable, etc. Keep checking the PSG Newsletter, and possibly our Website, for updates.

Somewhat late, the main meeting started, with Phil Bragg's talk on Phasmids of Lowland Forests of Sabah, based on his trip there last Christmas. I found Phil's talk possibly even better than his last one, and he introduced some interesting facts. E.g. that phasmids often do not feed on the food plants they are found on (as they could just be in transit to their favourite bush), and that 3 or even 2 legged phasmids can be found surviving in the wild. Sadly, no-one brought in a video recorder (or camcorder) so we were unable to experiment with taking videos of talks for future use.

We then had a lunch-break, which was very short to enable us to get back on track to our planned running time; which was no big problem as you could eat your lunch as you listened to the talks. I used this break to have a quick look around the museum's shop with Tracey and Dale which, as I often say, is full of fascinating stuff you just don't see elsewhere.

Straight after lunch, Judith gave an excellent introduction to the meeting's guest family Phylliidae, and had on display all the museum's trays and books on the subject, that she had kindly brought in. Only Allan Harman had brought in live stock, but just the specimens in the trays were fascinating.

Next George Beccaloni gave the results of the Heaviest Stick Insect weigh-in. Last year's winner, Sergi Romeu, had an excellent 152mm specimen weighing 34.6 grams (last year he won with a 150mm specimen weighing 42.9 grams), but the winning entry, by Bob Simoens and Kristien Rabaey, also beat last year's winner, with an amazing 158mm specimen weighing 49.2 grams but still not beating the record of 51.2 grams (definite), and 65 grams (estimated). [More details on this subject are on one of my flyers.]

Then Rob, Kristien, and Joachim gave us an excellent talk on their 20th anniversary Phasma Expo, a 3-day show in Veurne, Belgium, 21-22 April, 2007. Their show must have been magnificent, and they apparently did it in five languages too. They had a big sign across the main street advertising the show days before it was due, lots of merchandise e.g. pens advertising it, and it was opened by Veurne's Mayor. They had Phasma members, PSG members, dignitaries, and members of the public attending. They also had 176 species of stick insect on show, shown in the order of their PSG number, each with a notice giving various details on it. Five talks were given. The whole town was involved! How do they manage to run such an excellent show? I'm sure the PSG's resources cannot compete with them on that score. They also mentioned their project to keep all species of phasmid in culture – especially the less showy ones, which some keepers seem to tire of. ? Judith agreed the project is excellent and that the PSG had been concerned about this problem for years and hoped to be able to assist with it.

Next was the Question and Answer session. As usual, I could not write quickly enough to keep up with all of it, but there were 4 main questions I recorded the gist of:

1. What is the best way to keep *Phyllium*s? There was a lot of contradictory advice given here, on humidity, ventilation, temperature, substrata, size of container, etc, so clearly different systems worked for different people. But there was one common thread - if what you were doing was not working for you, then try something else.

2. Where were the trays of insects that used to be on display in the museum? The answer was they were removed when the insect gallery was changed in the 1960s; there is now no formal insect display, but there are about 28 million insects stored in the Department of Entomology. Specialists visit from around the world to examine this collection; any PSG member wishing to see the Phasmida Collection may do so by prior arrangement with Judith.

3. How can you preserve dead stick insects? Various points were covered, but generally it was said the stick insect had to be killed in its prime for the best chance to keep its colour, and it could be humanely killed by placing it in the freezer. You then need to dry it quickly e.g. in a very low oven, or cover it with silicon gel crystals, and remember to put a pin through it before it dried hard.

4. How do you find stick insects in the jungle? Again, many points were raised but, generally, you were advised to do some research on the area before you got there, to go out in the early evening with a torch, to search the edges rather than in the thick of the jungle, and you needed to be patient - even experts can spend 6 hours searching before finding anything.

We then announced the winner of the Phasmid Wordsearch Competition, and it was Kristien Rabaey, with the answer "Trachyaretaon", and she won the prize of an adult pair of PSG 255s: *Trachyaretaon brueckneri*. The competition was very popular; I could see people all over the room having a go at it, so we may well have another at future PSG Meetings. Many thanks to Derek Pattenson for providing both the Wordsearch and the prize, and to Natalie Ford for judging.

Finally, there was the ever popular livestock exchange. On the table there were the usual piles of spare sticks that members had kindly brought in for other members. All labelled, of course; though I did not notice any using the new labelling system Derek had recently put onto the Stick Talk website, but I could have missed them. (It is a very good label-wizard, see for yourselves at www.sticklist.com, and press the "labels" icon – and for an excellent interactive PSG culture list, press the "PSG Culture List" icon). I picked up some PSG118 Aretaon asperrimus, PSG9 Extatosoma tiaratum, PSG224 Parapachymorpha zomproi, and my particular favourite, PSG258, Pseudophasma perezii.

I was impressed with Dale at the livestock exchange; he knew exactly what he wanted, what food plants he had access to, AND how many species he was allowed to take home. The only problem was, by the time he had looked up the species on offer, sometimes it had already been handed out!

Of course, between all this going on there were other activities, e.g.: Natalie's market stall where she was selling off some containers, plants, etc, at very reasonable prices, which was quite popular so we may have a similar stall at future meetings; there were samples of evergreen oak kindly brought in by Alan Hendy to show other members what it looked like – it is a useful source of stick insect food in the winter; a display of new Australian species by Paul Brock, *Cigarrophasma tessellatum* and *Onchestus rentzi,* raised on eucalyptus, captive reared under permit, and for use in a DNA barcoding project with Jack Hasenpusch; etc, and of course the all-important meeting and greeting of all our friends throughout the day. E.g. I met Sarah who tried to interest me in a new species of snail – I declined just in time, phew!

At the PSG Summer Meeting in 2006 we seemed to have too much spare time and not enough going on, ie a very long lunch break and only one talk (albeit an excellent, Illustrated talk on "Respiration in Phasmids" by Chris Pull). I wanted the members who travelled all the way to this Summer Meeting to go away feeling they had had their "money's worth". Personally, despite the travel problems and the late start, I think the busier format was a success. If anyone has any comments on meetings, eg what you liked, what you did not like, and what else you would have wanted, please let me know (13 Runnacles Street, Silver End, Witham, Essex, CM8 3QN, England, or e-mail, mikelsmith@tinyworld.co.uk).

CD ROM Review: Etymology of Phasmid Names

Paul D. Brock (Treasurer & Membership Secretary)

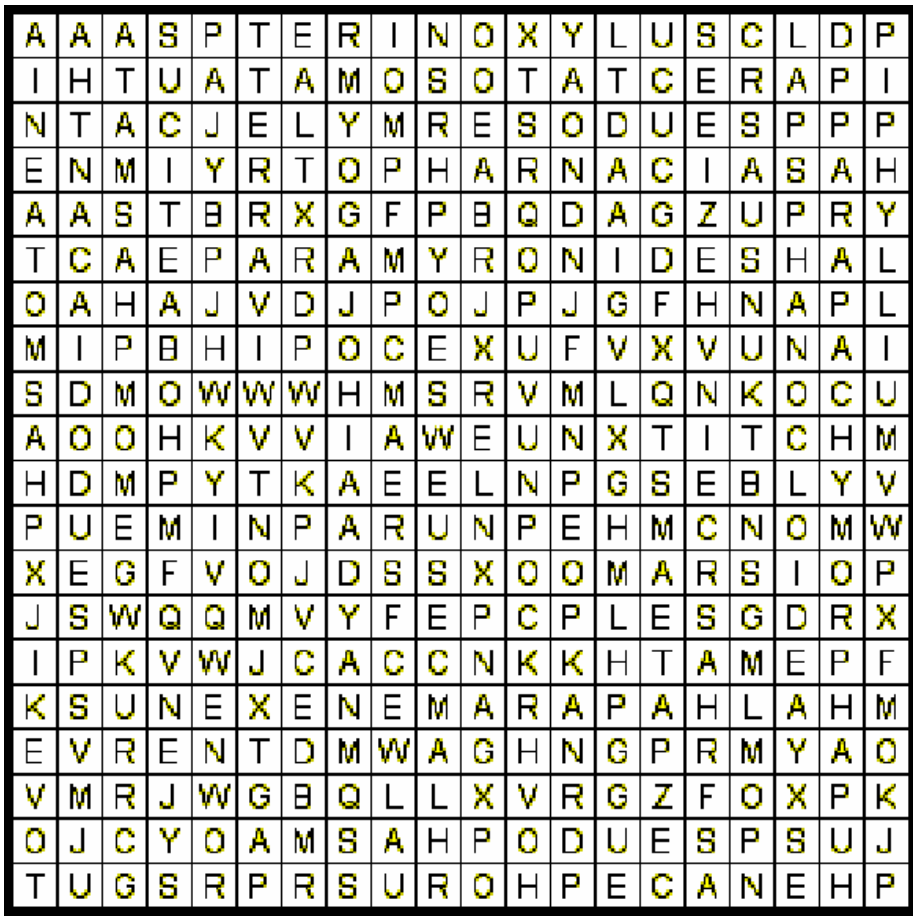
Whilst in the middle of preparing a draft of a field-guide on Australian phasmids, I received a welcome break from work in the form of a CD-ROM *Dictionnaire Etymologique des noms scientifiques des Phasmes (Phasmatodea)*. Written by Frédéric Poitout and released with the help of the "Association Phyllie" (Batiment A, Escalier B, 35 route de Garges, F-95200 Sarcelles, France) in 2007, this 764 page work [in French] is available for a very reasonable 10 Euros, including post & packing. Make remittances payable to "Association Phyllie"; it is also possible to order the CD-ROM direct from the author, e-mail Frederic.poitout@educagri.fr for further details.

This publication is the type of work to periodically dip into for information on the etymology of genera and species, as well as scientific terms, anatomy etc. which are seldom mentioned in scientific literature. There are some useful general photographs of phasmids and entomologists, also a bibliography, list of websites and information on fossil species, antiquity & mythology amongst other subjects. Having started preparing lists of derivation of names of Australian genera and species, I was informed by CSIRO Publishing this would be of little or no interest to the general public! However, etymology is an interesting subject for many entomologists, particularly those describing new taxa, and it is therefore good to see "Association Phyllie" (publishers of the 'Bulletin d'Arthropoda') encouraging publication. This work must have been an immense task for the author, who hopes to have an English translation available during 2008. If you cannot wait for this, why not try to improve your French!

New names are, of course, being added regularly. Whilst the author welcomes suggestions and corrections, he informs me that he has no plans to have this work on a website, but can obviously update it by issuing a 2nd Edition of the CD at a later date.

Word search

Mike Smith



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T	U	G	S	R	P	R	S	U	R	O	H	P	E	C	A	N	E	H	P

PARAMENEXENUS
PARAMYRONIDES
PARAPACHYMORPHA
PARECTATOSOMA
PERUPHASMA
PHAENOPHAROS
PHANOCLOIDEA
PHARNACIA
PHASMA
PHASMOTAENIA
PHENACEPHORUS
PHOBAETICUS
PHYLLIUM
PSEUDODIACANTHA
PSEUDOPHASMA
PSEUDOSERMYLE
PTERINOXYLUS
PYLAEMENES

Livestock Labelling

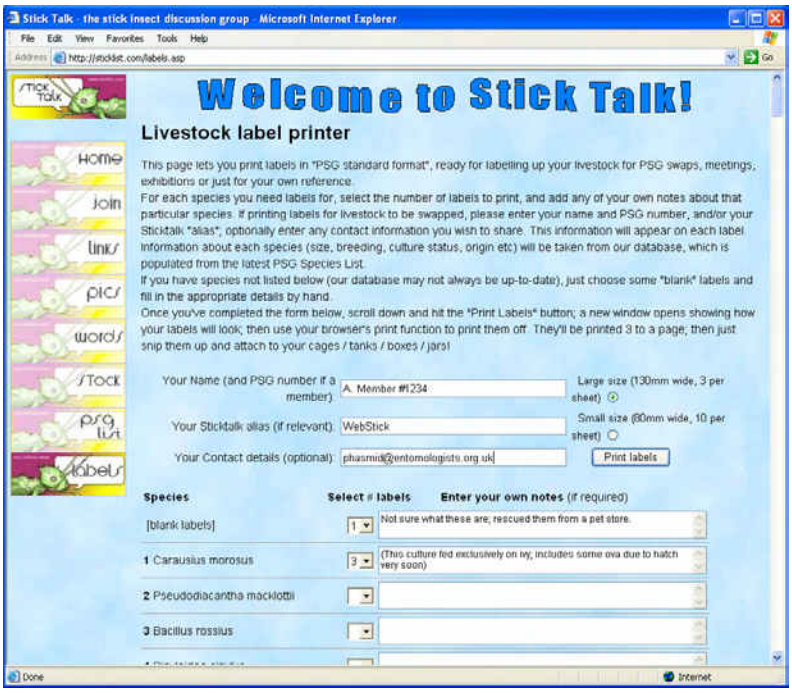
Derek Patterson

In March 2007 Chris Pull wrote a useful article suggesting a standard format for labelling our livestock. This is useful not only for meetings and swaps, but can serve as a longer-term reminder on our cages, for those of us whose memory is not what it should be.

I've gone through the "labelling up" process prior to meetings several times, using methods from carefully-formatted Excel generated sheets to hastily-written post-it notes (written on the train on the way to the meeting!). Whatever the method, I've found it to be time-consuming and brain-wracking, and the results very variable, and often inaccurate.

As webmaster of Sticktalk, it occurred to me that, as the building society ads say, "there must be a better way", and that perhaps that could be via a web-based tool. Thus, with about a week to go before the PSG summer meeting, I set to in my non-existent spare time to create a tool for use by Sticktalk and PSG members – and indeed anyone else who wished to use it.

Based on the most up-to-date version of the PSG species list I could find (and have since updated), printing labels can now be a simple point-and-click process, generating labels to the proposed standard and with all the information pre-populated. Whilst the initial version created labels about the same size as shown in the last PSG newsletter, which are great for labelling permanent cages, it dawned on me that these could be over-large for labelling smaller containers for swaps (or small boxes of ova etc); therefore the tool was enhanced to give an option of large (130mm x 50mm) or small (80mm x 40mm) labels, these latter fitting 10 to an A4 page. Moreover, at the large size, the abbreviations for culture status, breeding method and foodstuffs are all expanded to full text. I have "enhanced" the proposed standard form very slightly, to include the country of origin of the species. Where temperature/humidity information is not available (and currently it's not present on the "official" PSG list), this data can help you make an educated guess at the likely climatic conditions needed. I've also included an optional "contact" section at the bottom; new owners can then contact the previous owner to provide feedback or seek advice.



To use the facility, all you need is an internet connection and a printer. Point your browser at http://www.sticklist.com and choose “Labels” from the menu at left. You’ll be presented with a form where you select the labels you need. First, (but optionally) enter your PSG Name and number, your Sticktalk “alias”, and any contact details (then your sticks’ new owners can give you updates on their progress). Next, select either Large or Small labels. The main bulk of the form is taken up with a list of species, in PSG number sequence. For each species you need labels for, choose the number of labels (up to 8 in a single print run). Optionally enter any additional notes you wish to appear on the label (for instance any additional information about how you raised the stock, their origin, and so on). If you have species which do not yet have a PSG number (or are not on the Sticktalk list), you can create “blank” labels (the top item in the list) and just write in the species information in the appropriate boxes when printed. Then all you need do is hit “Print Labels”. A new browser window opens, showing your formatted labels as they will be printed; then just use your browser’s menu to print them to your printer. (The preview shows a horizontal line where there will be new page; this line isn’t printed, but instead your printer will start a new page at that point, so hopefully you won’t end up with labels split over a page; the utility is intended for A4 paper). Once printed, don’t forget that good old fashioned hand-writing can be employed to add further information to the labels; for instance, our database doesn’t currently hold temperature / humidity information, so you may want to write that in by hand.

In order for the labelling system to work, it meant I had to create our own database version of the PSG species list. This list itself is now also available on the Sticktalk website, in place of the previous link to the PDF format lists. The new pages are sortable by number, name, family and origin. Now that I have this database available on Sticktalk, there are some interesting possibilities; I’m hoping to create a Google Maps mashup which will allow us to view the data in new and exciting ways… maybe more on that in a future newsletter?

If you have any comments on the labelling tool, or suggestions for additions to the Sticktalk website, please contact me at admin@sticklist.com

DNA BAR CODING PROJECT ON PHASMIDS – CBOL

HOW CAN PSG MEMBERS HELP?

Paul D. Brock (Treasurer & Membership Secretary)

Professor Barbara Mantovani, Paul Brock and Jack Hasenpusch are collaborating in a just starting project for DNA bar coding (Ratnasingham & Hebert, 2007) in Phasmida. The initial emphasis will be on the Australian fauna where there are several taxonomic issues to be resolved. This hopefully should add to the Consortium for the Barcode of Life aims (http://www.barcoding.si.edu/DNABarCoding.htm) through a molecular taxon diagnosis, but, the analysis will also produce meaningful data concerning phylogeny at the genus and species levels.

The following is a list of CBOL requirements for this project

1 Species name (although this can be interim).
2 Voucher data (catalogue number and institution storing).
3 Collection record (collector, collection date and location with GPS coordinates).
4 Identifier of the specimen.
5 COI sequence of at least 500 bp.
6Polymerase chain reaction (PCR) primers used to generate the amplicon.
7 Trace files.

The project involves a requirement to sequence 5 to 6 specimens of each species (possibly even 5 to 6 specimens from different localities in some cases, an example would be *Extatosoma tiaratum tiaratum* from north and southeast Queensland, whose nymphs exhibit population differences); adults of both sexes will be selected so that the identification is unequivocal. It is the intention that voucher specimens will be preserved dry, for the Australian project

lodged in the Natural History Museum, London and Australian depositories; a leg from each specimen will be preserved in 100% alcohol for a wide molecular analysis, cross-referenced to voucher specimens. Barbara Mantovani will organise the DNA bar coding in Bologna, Italy. Hopefully, other research groups from different parts of the world dealing with the molecular approach will join her efforts. I will be responsible for identifying each specimen.

Whilst starting serious work on the Australian fauna (of which a new catalogue of species is about to be published (Brock & Hasenpusch, in press)), it is our intention to make good progress with the world phasmid fauna, an ideal opportunity for researchers and collectors to make a contribution to science. As we need GPS coordinates, it is likely that a number of culture stocks will not be suitable for analysis, as we must be certain about the collecting site.

TO HELP: Any members who have sufficient surplus livestock with an undoubted origin are invited to contact me initially. If made available at the AGM or summer meeting, formalities can be dealt with direct at the Natural History Museum, otherwise arrangements can be made. I will rear nymphs up if necessary.

European plants used for feeding stick and leaf insects

Javier Tamayo Lorenzo

As we already know, all stick insects feed on plants. Many of the species that we keep are polyphagous to some extent, although the great majority of the species that we maintain in captivity can be fed with plants of the family Rosaceae and in particular on bramble. This could be because bramble does not develop a great amount of tannins, in comparison with other species, because it already has a method of natural protection, its thorns. The problem with the breeding of other species is that they do not usually accept this plant as food and often it is impossible to adapt their tropical diet to the plants that we can offer them in Europe.

Thanks to many breeders and investigators, who have spent their time travelling, bringing back stick insects and trying to identify the plants which they feed on in their country of origin, we can raise species that years ago were unimaginable in Europe. The main problem relates to the winged species, because they usually have a generally monophagous diet and in many instances they restrict their diet to a single, or only a few, species of plant. To give an example, many species of the subfamily Necrosciinae, with fantastic colourations, are fed mainly on species of plants of the *Cinnamomum* genus, which are quite difficult to obtain from regular traders. In this article, we try to give basic knowledge on the plants most commonly used for the food of our well-loved friends. The best stocks of polyphagous stick insects are obtained by the use of a mixture of several different species of plant.This appears to be because they can obtain more nutrients and consequently, the adults reach a greater size, live longer and produce more eggs.

Bramble:
It belongs to the Rosaceae family and we can say that this is the plant accepted by most of our species.
Species of the *Rubus* genus are grouped under this name, and they are also accepted by our stick insects; this is the reason why it is not necessary to have special care taken in trying to identify them (quite a difficult thing, by the way). As has already been explained before, this plant produces few tannins, but is not free of them.

It has a natural system that all the vegetal species have to some extent, in that it creates a natural insecticide that acts as a poison in some insects. In almost all plants, the development of tannins and natural insecticides takes place in the new buds of the plant. Therefore, it is necessary to take special care to collect leaves with a fresh appearance, but if possible those that are not new buds, although many stick insect species appears to be immunized against these poisons.

The best brambles are usually those that grow in shady places, because they develop an enormous density of foliage and they have much more water in their leaves than those collected in drier sites. This will assist in the hydration of our stick insects; besides it increases the relative humidity of the terrarium, due to the transpiration of the leaves, which is necessary in almost all the tropical species of stick insect so that they moult correctly. The brambles are usually on the edges of roads, streams, etc., but it is necessary to take note of where they grow; those that are near areas cultivated by man are not reliable, since they are usually subjected to substances harmful to insects. Those that are in urban zones with much pollution are not very good either because of the contamination which spreads to the leaves and can end up killing our stick insects.

In winter, in cold sites, it is necessary to look for brambles in places protected from frost, such as, for example, within an evergreen forest, or to try to take the branches that are underneath and those that consistently keep their green colouration, since bramble is evergreen and resists weak frost, but is affected by strong frost.

In order to gather the bramble, we will use strong gloves and scissors to prune. We will cut the stem to the chosen height and will pull it from the end, not the other way round, because the thorns of the bramble are directed downwards, which would make its extraction difficult if we tried to do it the other way round. The best time to gather plants is at night,

because their natural cycle means that the leaves wilt as little as possible if they are cut at night. After cutting them, it is necessary to place the stems in water as soon as possible to avoid them wilting, and in order that they stay green longer. Normally a cut bramble remains alive in water for around one week, depending on the room temperature; after this we must change it, if we do not want to have losses among our stick insects.

Some small nymphs are not able to feed on very coriaceous leaves and it is possible to encourage them to do so by cutting the edges of the leaves, or introducing some large stick insects into the terrarium which could start to break the edges of the leaves. Once we have collected the bramble, it is necessary to wash it with water, to eliminate all undesirable creatures that could enter our terrarium, such as spiders and aphids. A trick to make the brambles stay green a little longer is to add a little sugar into the water glass, and by treating it with this, the water stays as clean as possible.

Rose:
These plants, so well-known by their flowers, belong to the same family as the bramble (Rosaceae) and therefore are a good alternative food if bramble is not available. The cultivated varieties of *Rosa* sp. are usually evergreen, although wild roses usually lose their leaves in winter and are generally accepted less than bramble. It is necessary to pay special attention to plants bought from breeders, because they are usually dewy with insecticides. The flowers can be cut off, since stick insects usually ignore them.

Strawberry:
The strawberry, also well-known for its fruit, belongs to the same family as the bramble (Rosaceae) and the genus of these species is *Fragaria*. Their leaves are also a good alternative food and are generally a favourite of some small stick insects like *Epidares nolimetangere*. In winter, although it loses a great amount of leaves, it retains a rosette at its base that can be used as food. In order to cultivate it, if we have a small garden, it is sufficient to cut the stems that extend from the ground and they take root easily, forming new plants. It needs moderate humidity.

Hawthorn:
In Spain it is known by the name of “Majuelo”, due to its red fruits, named “majuelas”. It also belongs to the Rosaceae family and their species are grouped under the *Crataegus* genus. It is a deciduous wild plant that is used sometimes in gardening for the creation of thorny hedges. It is armed with strong thorns and its leaves resemble those of parsley. This plant is not widely accepted by stick insects which are normally fed with bramble, although it is used for some species in emergency situations. The best way to verify if our stick insects accept it is to introduce it mixed with the usual foodplant, so we will be able to verify if they eat it without having unnecessary losses.

Firethorn:
This plant belongs to the Rosaceae family. Their species are grouped under the *Pyracantha* genus, and are usually grown to form thorny hedges, due to their strong thorns and their resistance to frosts and contamination. The name of firethorn must be due to the fact that the fruits are grouped in bunches and have a strong orange-red colour. It is a good alternative food in winter for species like *Extatosoma tiaratum* and some *Lonchodes* species, although the strong thorns can be a small problem for our friends.

Cherry

Other species in the Rosaceae family:
As we cannot include all the species of Rosaceae that are usually accepted, we will mention other plants grouped in this family that can also be used successfully, such as the main fruit trees, i.e. apple (*Malus* sp.), cherry (*Prunus* sp.), almond (*Prunus* sp.), rowan (*Sorbus aucuparia*), whitebeam (*Sorbus aria*), cotoneaster (*Cotoneaster* sp.), etc. All of them are a good alternative to bramble; in particular I mix them as food for stick insects of the Heteropterygidae and Lonchodinae families with excellent results.

St. John's Wort:
This is a plant of the Gutiferaceae family, whose genus is *Hypericum*. Some of their species are used in healing and antidepressant medicine, but perhaps for us the most interesting species is *Hypericum calcynum*, which usually grows on slopes and in gardens due to its upholstering effect. This wide-leafed plant keeps its leaves all year if it is not exposed to strong frost, and usually it lasts more than one week without drying out if we put its stems in water. Also it is easily cultured in areas of sun or semi-shade since it reproduces very well by seed and by division of the bush. It is particularly suitable for species with a rare foodplant like *Parectatosoma mocquerysi* and *Rhaphiderus scabrosus*.

Eucalyptus:
This is a plant of the Mirtaceae family, which can serve as a foodplant to some of the more interesting stick insect species such as *Eurycnema goliath* and *Diapherodes gigantea*. The species that are most usually cultivated in Europe (particularly in Spain) are *Eucalyptus globulus* and *Eucalyptus camaldulensis*, due to their fast growth and their use in the paper industry. I have read that *Eucalyptus globulus* is not a good food for *Eurycnema goliath*, but I have used this species to feed *E. goliath* successfully for several generations.This plant has become a plague in areas where the conditions are favourable to it, i.e. where it is not subjected to strong frosts and, principally, where it is near the sea. Plantations of Eucalyptus cause a fast desertification of the area where they are planted; their considerable water requirements dry out the area. Furthermore they bring about the acidification of the ground, caused by its leaves. In addition, like all good invading species, it is very difficult to eradicate even if cut level with the ground, since it is able to sprout again from the root. If we live inland, with harsh winters, it will be more difficult for us to find these two species, although another species exists, with the widest leaf, called *Eucalyptus gunnii*, which is used in gardening and is to some extent more resistant to frost. If we can obtain this one from a breeder, we can cultivate it with care by the method described previously.

Oak and Holly Oak:
These trees, known under the *Quercus* genus, belong to the Fagaceae family. They are specially recommended as a foodplant for *Phyllium* species, since, when combined with bramble, they can give us the best results in the breeding of these well-loved species. The oak, widely found in Europe, is a deciduous tree, although there are species grown in the gardening hobby which do not lose their leaves in winter. Normally the oaks are “marcescent”, i.e. they keep their leaves on the plant once winter has begun, although they have dried up completely. This can help us, since we will be able to collect its leaves over a longer period of time, after the cold has arrived. The problem is that once spring has begun, they also display a small delay in the emergence of new leaves in comparison with other plants. As an alternative, we can use the holly oak (*Quercus ilex*), if it keeps its leaves in winter; although due to their coriaceous leaves, they are not a good substitute for small nymphs, which normally cannot break the very hard leaves with their small mouthparts. It is necessary to choose the leaves from the upper part, since the lower ones usually have a great number of thorns as a method of protection from animals that feed on its leaves.


Sweet Chestnut

Other important Fagaceae:
In summer, we can also try beech leaves (*Fagus* sp., in Europe normally *Fagus sylvatica*), that are a good alternative food for the *Phyllium* sp. Also the sweet chestnut (*Castanea sativa*), which belongs to the same family, Fagaceae, is a good option as an additional food for the summer (these two species are deciduous). The distribution of *Fagus sylvatica* in Spain is restricted to the north of the country, since it is a species that requires rain in summer in order to achieve optimal growth. In other European countries it is possible to find it frequently. Therefore their leaves can only be gathered in northern areas, because the most southern concentration of *Fagus sylvatica* in Spain is in the locality of Montejo de la Sierra (Madrid). The sweet chestnut, although it also reaches its maximum population densities in the north, can be found in almost all European countries, either in form of isolated trees or in groves, and is more abundant in the wetter parts of these countries. They have leaves of great size and provide a large amount of food, which makes it very suitable for gluttonous stick insects. It must not be confused with the horse chestnut (*Aesculus hippocastanum*), of the Hippocastanaceae family, which usually stands in parks and gardens due to its ornamental nature, and whose large leaves possess 5 to 9 leaflets.In addition, the chestnuts that this one produces have a strong bitter taste.

Privet, Lilac and Olive:
These 3 species, belonging to the Oleaceae family, are those that can give us better results in the breeding of stick insects which feed on Oleaceae plants, mainly American species like *Anisomorpha* or representatives of the *Pseudophasma* genus, known by their great capacity for flight. Privet (*Ligustrum* sp.) is frequently used in the formation of hedges. It is an evergreen plant, but deciduous varieties exist; therefore if we want to acquire this plant

from a breeder, we have to ask for the right variety. Lilac (*Syringa* sp.) is a plant also quite well-known for its pretty and perfumed flowers. It is a deciduous tree, but in summer it can be used successfully for the species that accept privet. The olive (*Olea* sp.), is a reasonably well-known tree widely cultivated for its fruit, the olives. (*Aceitunas* in Spanish). Its distribution is quite wide although the greater populations are found in the East and the South of the Iberian Peninsula. Its wild form (*acebuche* in Spanish) is equally acceptable as food, which is why identification of the exact species is not necessary while collecting its leaves.

Ivy:

Ivy (*Hedera* sp.) is a plant of the Araliaceae family that is commonly used on fences due to its being a climber and the great amount of leaves that it develops, forming a large compact mass. The leaves remain on the plant all year and can be used for some species during times of shortage, although this plant is not very good for many stick insects when used for long periods of time (among the few cases of phasmids that will accept this plant, we will mention *Lamponius guerini, Neohirasea maerens, Phaenopharos khaoyaiensis* and *Phenacephorus cornucervi*). The advantage of this plant is that, in addition to not having thorns, it usually stays quite green when we keep its stems in water. Also we can cultivate it in a small garden and it turns out to be very resistant to frost.

Acacia:

The genus *Acacia* includes more than 1000 species which are included within the Leguminosae family.
These trees are usually planted for their ornamental nature and their pretty flowers, such as *Acacia farnesiana*, which in spring covers itself with yellow flowers. The species that commonly grow in Europe are usually deciduous varieties - the reason why we cannot use them in winter. They are a good complementary foodplant for stick insects from Australia, such as *Eurycnema goliath* or *Extatosoma tiaratum*. It is necessary to take care while gathering them, since they usually have sharpened thorns that can measure more than 5 cm, depending on the species. Some species belonging to the same family, such as *Robinia pseudoacacia*, are poisonous to man although some stick insect species will feed on them successfully. Other varieties from the same family, such as *Dorycnium*, (plants known as “shepherd grass” in Spanish), turn out to be the main food of some species of European stick insects like *Leptynia hispanica*.

Azalea and Rhododendron:

The azaleas and rhododendrons are species of the genus *Rhododendron*, belong to the Ericaceae family. These plants are usually cultivated for their pretty flowers that vary between white and pink, depending on the species. They are appropriate for stick insects with an unusual diet, such as *Rhaphiderus scabrosus* and *Aplopus* sp. Deciduous and evergreen species exist and can easily be found in their natural form in the mountains in the north of Spain, as well as in other European countries. Nevertheless we will always be able to resort to conservatory species if necessary.

Grapevine: The grapevine (*Vitis vinifera*) is a creeping plant that belongs to the Vitaceae family. This climbing plant has come to be grown for its well-loved fruits, the grapes, from which the well-known wine is produced. Also it is usually used in the covering and decoration of porches and terraces, since it has a climbing trunk; it is possible to give it a form to adapt to the structure we wish to cover. It is a plant that loses its leaves in winter, which is why we will be able to use its large leaves only in the warmer seasons.

Although it is not a plant greatly accepted by the stick insects to which we offer it, it is quite acceptable in a mixture of food for polyphagous species such as members of the subfamily Heteropteryginae, for example. Some species like *Epidares nolimetangere* eat this plant without problems, although it is offered along with bramble. Usually it reproduces by cuttings, or by buying the classic “stock”, which we can plant during the winter and thus have the first leaves in spring. It is a resistant plant that does not require humidity in summer, since it enjoys a large quantity of heat and direct sunlight. Due to the minimal amount of care that it requires, it is very convenient to cultivate without having to worry too much about the plant.

Laurel:

The laurel (*Laurus nobilis*), is a plant of the Lauraceae family. This evergreen tree is widely distributed throughout Spain and all the Mediterranean area. The basic characteristic that is of interest to us is its great similarity to the cinnamon tree (*Cinnamomum* sp.); like this plant, it does not lose its leaves in winter and it turns out to be one of the best plants

that can be used for species of flying stick insects from Asia. In particular, success has been had in the breeding of species of the Necrosciinae subfamily, using this plant as food. It is important not to confuse the laurel (*Laurus nobilis*), with the well-known cherry laurel (*Prunus laurocerasus*), whose leaves are similar, since it is poisonous to man (take care when using it in food) and unsuitable for species that accept laurel as food. The most noticeable difference for recognising this *Prunus* is that the inflorescence develops as groups that grow out from the main stem. There, their flowers transform into fruits that resemble small cherries, leading to their name.

Fuchsia:
This plant (*Fuchsia* sp.) belongs to the Onagraceae family, which is also known by the name 'queen of the slopes' due to its pretty hanging flowers. It is a plant that is usually cultivated in small flowerpots and it requires some care, since it cannot resist frost and cannot constantly endure direct sunlight. It is essential for some stick insects of the genus *Abrosoma* and *Dinophasma*, although they can also be fed with other plants of the same family, such as the rosebay willowherb, *Epilobium angustifolium*. It is a plant very well known by the English, who usually use it as the main food of these species. In Spain it is difficult to find, at least in central areas where we have tried to collect it.

Hazel, Hazelnut:
The hazel (*Corylus avellana*) is a deciduous large shrub or small tree which belongs to the Betulaceae family.
Its main distribution covers a strip that borders all of Northern Spain and reaching as far as Portugal, although they can be in small isolated groups in humid central areas (we have found it in humid areas of the mountain range of Madrid, for example). In the rest of Europe it is also possible to find it in humid regions. This small tree is known by its fruits, the hazelnuts, and for this reason it is cultivated in some regions, although it is common to find it in the wild in areas where the conditions are favourable to them. It is also deciduous, but it is usually accepted by a number of stick insects, including some species of the *Phyllium* genus, which is why it is helpful in a mixture of plants in summer.

Due to its large leaves, it is also appropriate for gluttonous species like *Eurycantha calcarata*, which like to eat this plant.

Ferns:
Ferns constitute one of the only food plants for some stick insect species such as *Oreophoetes peruana*. In the wild, it is possible to see other stick insect species that include them in their diet, such as *Haaniella grayii*, *Epidares nolimetangere* and *Parasthenoboea* sp. However, these plants are not usually accepted by most of the stick insects and they can even be poisonous for some. If we raise species of stick insects that feed on these plants, we can provide some species for them that are found in the wild such as bracken (*Pteridium aquilinum*). This fern can stay green until the frosts begin, being commonest in mountainous regions and humid areas. During the winter it stays dormant thanks to the rhizome, which remains buried. Despite the fact that ferns lose their leaves in winter, they can be maintained if we keep them at high temperatures. Most of the ferns that are also sold for gardening turn out to be appropriate to feed to our stick insects, as long as we ensure that they have not been dealt with insecticide.

I hope that this article will help all the lovers of stick insects!!!

Exmoor Zoo

Steve from Exmoor Zoo

Well done to Janine, Cameron & Alan (and a 'heap' of others). Members of the PSG took over the Education Centre for the weekend to promote the PSG and keeping stick insects.

A display was set up, a living jungle with free ranging sticks for visitors to find, 17 all together of a variety of species, and yes we counted them all out and we counted them all back. Young and old alike delighted in supervised handling of insects many never dreamed existed let alone had ever had the opportunity to touch.

Particularly successful was a stick insect hunt that had been organised, a rare insect known as *"Hastilymade cardboardicus"* had escaped from the education centre around the zoo and younger visitors were encouraged to hunt them out, write their names on them and return them to their enclosure. At 3pm each day 2 were drawn from the cage and two lucky children won everything they needed to keep at pet stick insect and with parental permission several left with pink-wings to start their new hobbies. A big thank you to all who helped make the cardboard insects!

Sticks were painted on arms with face paint and even Cameron learnt a new talent!

Best of all the weekend highlighted the plight of the world's rarest stick insect and the money raised over the two days will be sent to Melbourne Zoo on behalf of the Zoo and PSG to help the Lord Howe Island Stick insect recovery project.

Formatting Newsletter Contributions

Ed Baker (Editor)

I have had several requests from people on the best way to send me their contributions. The answer is "it depends". If you are competent using the 'Style' functions of Microsoft Word then you can very quickly make your contribution very easy for me to import. However there are a few steps that even the less-expert computer users can take to make my life (and probably theirs) easier.

There is **no** need to make your article look well presented on the page. There's a very high chance that it will not look the same when the page is adjusted to the requirements of the Newsletter. It is more important to make sure that your article is arranged logically and easy to read.

Images are best sent as separate files at the highest quality/size possible

If you are adept at using styles then putting the title as 'Heading 2', your name as a new style called 'Author' and the rest of the article as 'Body Text' would be fantastic (subheadings can be in 'Heading 3').

But having said all of that I would rather receive something scrawled on the back of an envelope than nothing at all, so if the above makes no sense to you just send it however you can.

PSG4 *Sipyloidea sipylus*

Ryan Flew

Subfamily: Necrosciinae
Origin: Madagascar
Adult size: Females: 85mm
Food plants: Bramble, Hawthorne, Raspberry, Eucalyptus, Oak (they seem to really like this) and Rose

Description: Bache-fleshy pink coloured insect. Typical Sipyloidea body structure i.e. a short body and very slender legs. Fully functional wings, which are slightly pink. Little eyes, which protrude both sides of the head. Eggs are brown and grey and cylindrical.

Comment: All female species, although believed to be sexual in the wild. Can keep in almost any conditions, so either dry or humid. If kept dry, they will require frequent spraying, about every evening or so. Eggs are glued around the tank and/or on food plants. These are best left where they are, but can be removed if necessary. Be careful to check the tank thoroughly, as I had them lay in an area not visible to me in their tank (sneaky!) and ended up over run with them! Eggs hatch in about 2 -4 months.

PSG270 *Peruphasma schultei*

Ryan Flew

Subfamily: Pseudophasmatinae
Origin: Peru
Adult size (mm): F- 55 M-45
Food plants: Privet

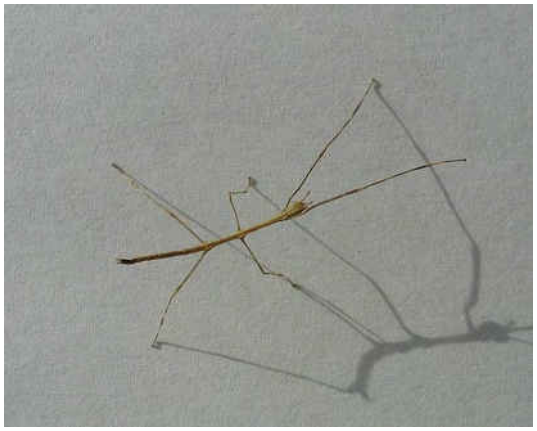
Description: Both sexes are velvety black, with white-yellow eyes and tiny red 'micro-wings'.

Comment: Easy to rear in fairly dry conditions. Recommended humidity of 40-60% and cooler temperatures of 18-24˚C. I use no substrate, although on the base of the cage there is a flattened kitchen roll tube, which the majority of nymphs hide in and under

throughout the day. They feed solely on privet, and this is available all year round. They don't fly; their wings are just a deterrent to would-be predators. One thing I will mention about them is the fact they have the ability to spray an irritating fluid from their prothoracic glands, (just behind the head,) which makes me sneeze. This shouldn't be too much of an issue, but don't put them too close to your eyes and wash your hands after holding them, just to be on the safe side.

PSG144 *Ramulus* sp.

Ryan Flew



Subfamily: Phasmatinae
Origin: Vietnam
Adult size (mm): F-105 M- 80
Food plants: Bramble

Description: I *believe* these are parthenogenetic, so all females. Lovely pea green, with patches of brown on the body joints. These are your typical stick, being very long and thin. The inner front legs are slightly serrated, and the antennae are very short.

Comment: Unlike most other *Ramulus*, i.e. *Ramulus magnus*, they are less quick to 'throw-off' their legs, scientifically called autotomy. This makes them good to handle. I have been breeding this species for close to 4 years now. Keep them dry and ventilated. If kept too humid they will have problems moulting, and may die. Most of the *Baculum* species have now been moved to *Ramulus*, so if searching for information, using the old name (*Baculum*) may help. Females last about 4-6 months as adults, and will lay ova about 2-4 weeks after having matured. Eggs will hatch in about 2-3 months, if kept on some tissue in a ventilated box, which is sprayed occasionally at room temp. I used a cricket tub with some toilet roll on the bottom for these guys. Hatch rate and survival rate is high, so make sure not to keep too many ova. I'd suggest incubating 20 ova.

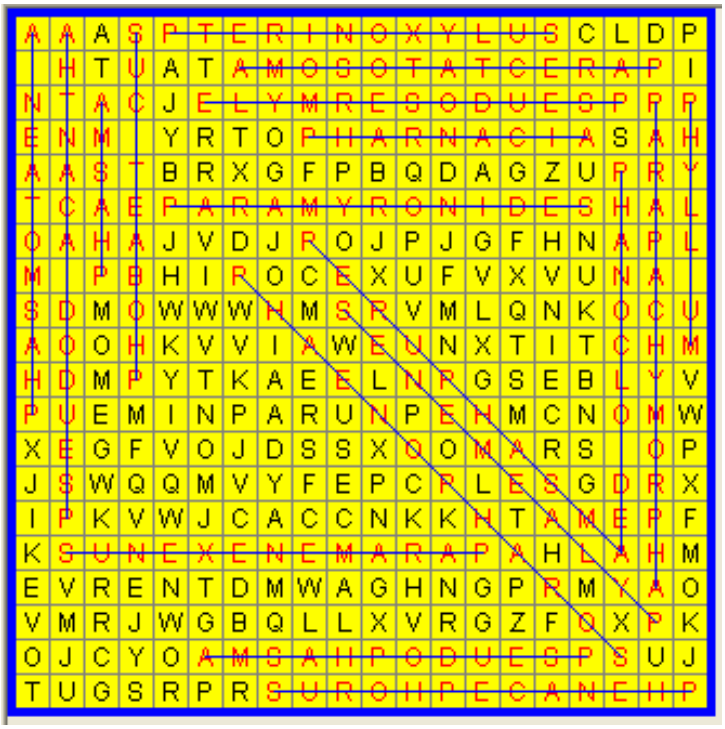
PSG195 *Sungaya inexpecta*

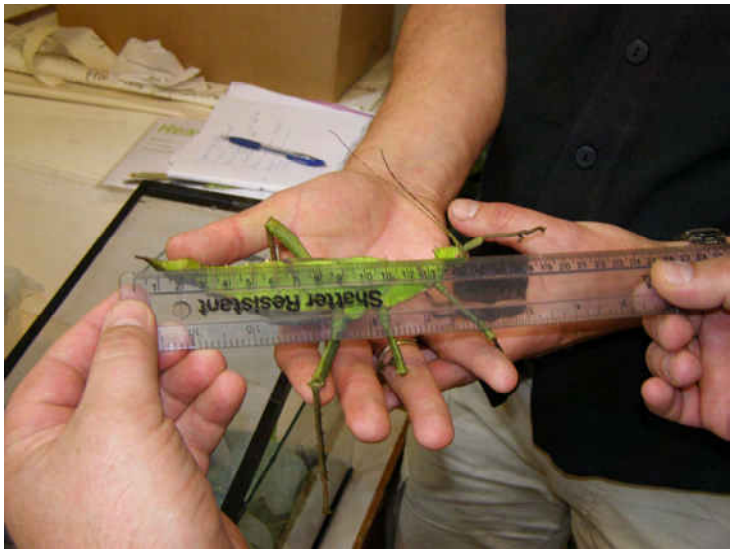
Ryan Flew

Subfamily: Obriminae
Origin: Philippines
Adult size: Females:80mm
Foodplants: Bramble

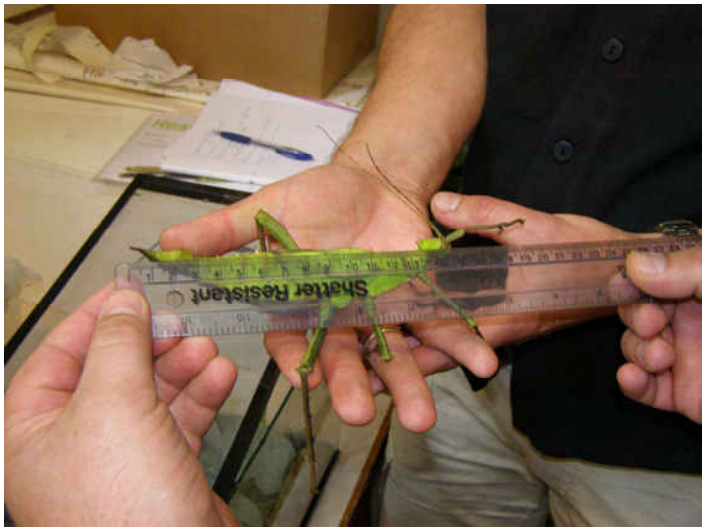
Description: Grey to brown insect. They have a small 'crown' on the top of their head. They have lots of very small, blunt spines, (more bumps) all over the body. Yellow eyes. Legs are very slender, and look as though they won't support body. Eggs are black, and ornate-looking.

Comment: Very good for the beginner. These are all female and reproduce by parthenogenesis. Keep nice and humid. Provide females with a place to lay ova, i.e. a pot of peat or similar. These take about 4-6 months to hatch. A real easy, easy one!





Left: Answer to wordsearch
Above: Heaviest *Heteropteryx* competition © Ingo Fritzsche
Below: Photographs of Exmoor Zoo Phasmid Weekend


Shatter Resistant