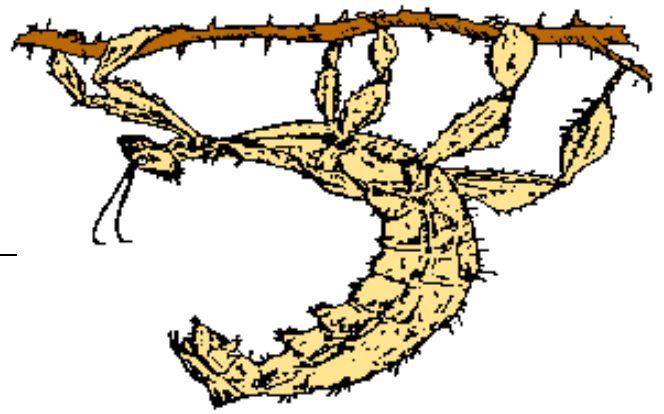


The Phasmid Study Group



Newsletter No. 122

June 2010

ISSN 0268-3806



Male *Brasidas foveolatus* with spermatophores.

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PSG SUMMER MEETING, Saturday, 10th JULY 2010

DOROTHEA BATE ROOM (Formerly Palaeontology Demonstration Room), NATURAL HISTORY MUSEUM, CROMWELL ROAD, LONDON, ENGLAND (*FREE PUBLIC ENTRY* members may also walk round the excellent museum if they wish*)

AGENDA

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

- 11.30am – 12.30pm** WELCOME, ARRIVALS & INFORMAL GATHERING:
Members are encouraged to exchange ideas and experiences, and view the displays, and merchandise.

Exhibitors to display their phasmids of New Guinea (*by 12.30, please*)**.

Bugfest Display by Nick Wadham

You are welcome to have a go at the Quiz***** – a special prize for the winner!
- 12.30pm - 12.50pm** Illustrated Talk by Rob Lind - Photography of Phasmid Eggs
- 12.50pm – 1.10pm** Introduction and display of drawers of Phasmids of New Guinea by Judith Marshall**.

Displays of livestock from this area welcome, please!
- 1.10pm – 2.00 pm** Lunch*** and viewing of exhibits, displays, and merchandise, and last chance to finish the Quiz.
- 2.00pm – 2.45pm** Illustrated Talk (To be confirmed)
- 2.45pm – 3.00pm** Panel of Experts answer your Questions on Stick Insects.
- 3.00pm – 3.10pm** *Results of the Quiz competition, by Derek Tylden-Pattenson *****.
- 3.10pm – 3.45pm** Livestock Exchange****, and final viewing of displays, etc.
- 3.45pm – 4.30pm** Further informal gathering, competitors and exhibitors to collect their entries, leftover livestock**** should be taken back by the contributor (please check).

*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 subject of display at this meeting is Phasmids of New Guinea. There are no rules for the display, just bring in your favourite specimens male, female, adults and/or nymphs, in a suitable container with food, labelled however you wish but ideally to include your name, their PSG No, and a few details about your specimen(s), please. Thanks to Judith for arranging this.

*** 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: e.g. livestock should be given some foodstuff, and their container be clearly labelled 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 normal seats throughout the session – i.e. do not crowd round, or obscure, the livestock table during livestock distribution.

*****You can do the quiz for fun only but, if you want to enter the competition, please ensure you hand it in to Derek Tylden-Pattenson (who is wearing a *Sticktalk.com* t-shirt) **by 2pm** (full details are by the quiz sheet). Answers will be put by the quiz sheets mid-afternoon. The judge's decision is final. Thanks to Derek for arranging this competition.

News, Information & Updates

The Committee

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SECRETARY *Ian Bushell*

Ian Abercrombie, Sarah Darwin, Kristien Rabaey and Rob Simoens

Diary Dates

PSG Summer Meeting

See details on opposite page.

Leeds Entomological Fair Sunday: 19 September

11am - 4pm. Blackburn Hall, Commercial Street, Rothwell, Leeds, LS26 0NW

Amateur Entomologists' Society Exhibition: 2 October 2010

Details to follow

Articles, Reviews & Submissions

Book Review: Big Bugs Life~size

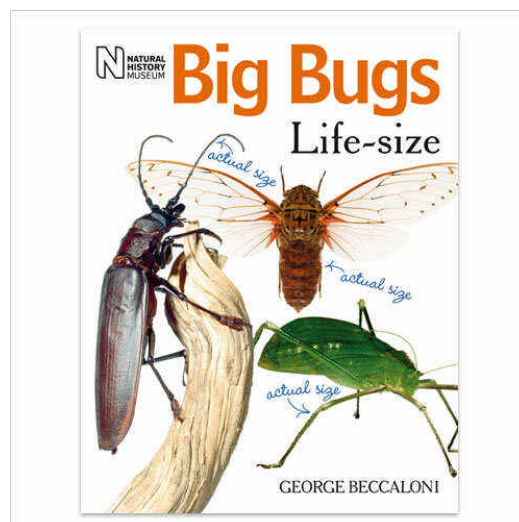
Judith Marshall (Chairman)

By George Beccaloni, published by the Natural History Museum @ £9.99

ISBN 078-0-565-09213-9

As George explains, the term 'bug' if strictly applied refers only to the large insect group Hemiptera which have mouthparts adapted for sucking up liquid food, from plants or animals. However 'bug' is also commonly used to refer to any insect or related non-marine arthropod, so within this book are a wide range of insects and other segmented creatures representing 20 different orders, of which 28 are true insects - with adults having six legs. So a very wide range in the 35 species illustrated, covering everyone's favourite giant – or worst fear!

The photographs are of real specimens, the majority of live specimens – and some hand-held to show size! Measurements and weights are metric (and given in imperial too), in his introduction George describes how he obtained these measurements, and also the choice between biggest/heaviest/greatest wingspan and other options. He followed the rule of selecting the largest representatives of all the major groups, called orders by scientists, of insects, arachnids (spiders and their relatives) and myriapods (centipedes and millipedes) that contain at least one species with an adult body length of 50 mm (1¾ in) or more.



Happily the Phasmida are represented by two species, both the longest and the heaviest! Chan's Megastick is illustrated with the smaller 132.5mm male and the 357mm female – she is shown on three pages, with a fold-out sheet! The Giant Jungle Nymph is of course the heaviest, the record of 51.2gm dating from 1977 at London Zoo, in spite of the recent attempts by Phasmid Study Group members to better this. Still, keep trying – George emphasises that maximum sizes and weights are those recorded so far – there is always a chance to 'beat-the-record' for a future edition of the book!

PSG members will note that both Giant Jungle Nymphs illustrated have had their antennae trimmed, the female slightly, whilst sadly the long antennae of the male have been reduced to tiny stumps. This was not as George intended, the original photographs showed intact specimens in their splendour – unfortunately authors have no control over the designer element..... no prizes offered, but entertaining to look out for other specimens which have clearly had antennae or other bits 'designed out'!

Many phasmid-lovers also have a fondness for related orthopteroid insects and so will appreciate the number of these illustrated, no fewer than 12 species featuring six related Orthopteroid orders. This reflects the fact that many orthopteroid species are larger than the average insect, and does not relate to the position that George holds as the Curator of Orthopteroid Insects at the Natural History Museum, and so must have a fondness for these magnificent creatures.

This will be an entertaining book for those with an interest in giant creatures, and hopefully will encourage the faint hearted to learn more – even if they prefer to stick to the printed page rather than meeting them face-to-face!

Book Announcement:

Mantids of the Euro-Mediterranean Area

Judith Marshall (Chairman)

By Roberto Battiston, Luca Picciau, Paolo Fontana and Judith Marshall

ISBN 978-88-903323-1-9

This book is the work of three Italian entomologists, with minor contributions from other colleagues, including myself.

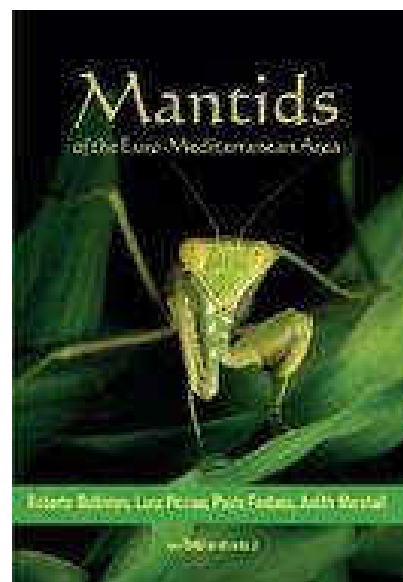
Roberto, Luca and Paolo took the brave step of deciding to write in English, to make the work more widely available to other Europeans. On reading their first chapters I suggested corrections to their written English, and a few changes in terminology, at which they offered me joint authorship if I would check the whole book! I did so, but we were under pressure to publish before we were all convinced it was finished, so I'm afraid to read it carefully as I'm sure there are corrections I've missed or which were not made – readers please feel free to let me know, in case it is reprinted.

The book has involved an immense amount of effort, covering as it does all aspects of the praying mantis including ecology, collecting and rearing, morphology, keys to species and checklists, illustrated with line drawings and excellent photographs.

Published by the World Biodiversity Association onlus* Verona, Italy, 2010.

http://www.biodiversityassociation.org/sito_eng/5r.php?news=172

*[Organizzazione Non Lucrativa di Utilita' Sociale = not for profit organisation] I asked them to change this but it slipped through.....



Culture survey 2010

Dear all, every year we send this list to all our members. With this list we want to update our knowledge of which species of phasmsids are still in culture.

The purpose of this survey:

- Knowing which species is cultured and by whom, so if you need information or if you search for a certain species you know who to contact;
- To see which species are in good culture and to protect those which are at risk of dying out;
- To see which species is most popular;
- To see which species should be allocated a number on the PSG list.

The results will be ready in September 2010. We cooperate with PHASMA (Netherlands/Belgium), PSG (England), www.phasmatodea.com (Germany) and phasmania (France). For the names we used the PSG-list as it was on the 2nd of May 2010. <http://phasmid-study-group.org/specieslist>. Names between brackets are still in discussion.

X (cross): an established culture.

- (dot): a tentative culture.

Species not on this list can be added at the bottom.

PSG nr	Species	
001	<i>Carausius morosus</i>	
002	<i>Pseudodiacantha macklottii</i>	
003	<i>Bacillus rossius</i>	
004	<i>Sipyloidea sipylus</i>	
005	<i>Medauroidea extradentata</i>	
006	<i>Acanthoxyla prasina</i>	
009	<i>Extatosoma tiaratum tiaratum</i>	
010	<i>Phyllium biocolatum</i> var. <i>Pulchrifolium</i>	
012	<i>Anisomorpha buprestoides</i>	
013	<i>Acrophylla wuelfingi</i>	
014	<i>Eurycnema goliath</i>	
015	<i>Anchiale briareus</i>	
017	<i>Caribbiopheromera jamaicana</i>	
018	<i>Heteropteryx dilatata</i>	
019	<i>Lonchodes brevipes</i>	
023	<i>Eurycantha calcarata</i> var.	
025	<i>Phobaeticus serratipes</i>	
026	<i>Haaniella echinata</i>	
027	<i>Carausius chani</i>	
028	<i>Eurycnema versirubra</i>	
029	<i>Mnesilochus imitator</i>	
031	<i>Creoxylus spinosus</i>	
032	<i>Ocnophiloidea regularis</i>	
033	<i>Acanthoxyla intermedia</i>	
035	<i>Diapheromera femorata</i>	
037	<i>Lopaphus perakensis</i>	
038	<i>Dares validispinus</i>	
044	<i>Eurycantha calcarata</i> var.	
045	<i>Clonopsis gallica</i>	
052	<i>Alienobostra brocki</i>	
058	<i>Tirachoida cantori</i>	

059	<i>Phyllium biocolatum</i> var. <i>agathysus</i>	
066	<i>Carausius sanguineoligatus</i>	
069	<i>Dares verrucosus</i>	
070	<i>Haaniella scabra</i>	
072	<i>Phyllium giganteum</i>	
073	<i>Phenacephorus cornucervi</i>	
079	<i>Bacteria aetolus</i>	
080	<i>Acanthoxyla geisovii</i>	
081	<i>Acanthoxyla inermis</i>	
082	<i>Rhaphiderus spinigerus</i>	
083	<i>Rhaphiderus scabrosus</i>	
084	<i>Oreophoetes peruana</i>	
085	<i>Pseudophasma rufipes</i>	
089	<i>Sosibia parvipennis</i>	
090	<i>Ramphosipyloidea gorkomi</i>	
099	<i>Epidares nolimetangere</i>	
100	<i>Lonchodes amaurops</i>	
101	<i>Lamponius guerini</i>	
103	<i>Sipyloidea</i> sp. THAILAND 8	
105	<i>Parapachymorpha spinosa</i>	
108	<i>Bacillus whitei</i>	
110	<i>Hoploclonia gecko</i>	
111	<i>Eurycantha coriacea</i>	
112	<i>Haaniella erringtoniae</i> (muelleri)	
113	<i>Dyme</i> sp. ECUADOR	
115	<i>Lopaphus</i> sp. Thailand 6	
116	<i>Pseudophasma bispinosum</i>	
117	<i>Dares ulula</i>	
118	<i>Aretaon asperrimus</i>	
119	<i>Lonchodes jejunos</i>	
120	<i>Carausius cristatus</i>	
122	<i>Anisomorpha paromalus</i>	

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125	<i>Haaniella grayii</i>		227	<i>Entoria koshunensis</i>	
126	<i>Haaniella dehaanii</i>		228	<i>Entoria formosana</i>	
127	<i>Hermagoras megabeast</i>		230	<i>Lonchodiodes samarensis</i>	
128	<i>Phyllium westwoodii</i>		231	<i>Abrosoma festinatum</i>	
138	<i>Mnesilochus modestus</i>		233	<i>Neopromachus doreyanus</i>	
144	<i>Ramulus artemis</i>		234	<i>Xylica oedematosa</i>	
145	<i>Paramenexenus laetus</i>		235	<i>Brasidas samarensis</i>	
151	<i>Asceles margaritatus</i>		236	<i>Dimorphodes catenulatus</i>	
152	<i>Phanocloidea nodulosa</i>		237	<i>Pseudosemyle phalangiphora</i>	
154	<i>Acrophylla titan</i>		238	<i>Dinophasma kinabaluense</i>	
157	<i>Ramulus</i> sp.		240	<i>Lamponius portoricensis</i>	
161	<i>Phenacephorus sepilokensis</i>		241	<i>Carausius spinosus</i>	
163	<i>Sipyloidea larryi</i>		242	<i>Neohirasea hongkongensis</i>	
164	<i>Parapachymorpha spiniger</i>		243	<i>Entoria victoria</i>	
165	<i>Hoploclonia abercrombiei</i>		245	<i>Pylaemenes borneensis sepilokensis</i>	
166	<i>Dinophasma saginatum</i>		246	<i>Mnesilochus rusticus</i>	
169	<i>Mnesilochus mindanaense</i>		248	<i>Pylaemenes guangxiensis</i>	
171	<i>Rynchacris ornata</i>		249	<i>Metriophasma diocles</i>	
173	<i>Neohirasea maerens</i>		250	<i>Bacteria ferula</i>	
174	<i>Lopahus caesius</i>		251	<i>Ramulus</i> sp	
175	<i>Diesbachia tamyris</i>		252	<i>Lopaphus</i> sp. THAILAND	
176	<i>Lonchodes geniculatus</i>		254	<i>Ramulus magnus</i>	
177	<i>Haaniella saussurei</i>		255	<i>Trachyretaon brueckneri (carmelae)</i>	
179	<i>Clonaria fritzschei</i>		256	<i>Orxines semperi</i>	
181	<i>Hermagoras cultratolobatus</i>		258	<i>Parectatosoma mocquersyi</i>	
182	<i>Oxyartes lamellatus</i>		259	<i>Pseudophasma unicolor (menius)</i>	
183	<i>Sceptrophasma hispidulum</i>		260	<i>Diapherodes gigantea</i>	
186	<i>Chondrostethus woodfordi</i>		261	<i>Canachus alligator</i>	
188	<i>Oxyartes spinipennis</i>		262	<i>Stheneboea repudiosa</i>	
189	<i>Pseudophasma acanthonotum</i>		263	<i>Bacteria yersiniana</i>	
190	<i>Phasma reinwardtii (gigas)</i>		264	<i>Pseudophasma velutinum</i>	
192	<i>Orestes mouhotii</i>		265	<i>Abrosoma johorensis</i>	
193	<i>Tropidoderus childrenii</i>		266	<i>Agamemnon cornutus</i>	
195	<i>Sungaya inexpectata</i>		267	<i>Asceles</i> sp. THAILAND, SALOK	
199	<i>Hoploclonia cuspidata</i>		268	<i>Leiophasma lucubense</i>	
200	<i>Lonchodes mallei</i>		269	<i>Pseudophasma castaneum</i>	
202	<i>Medaura jobrensis</i>		270	<i>Peruphasma schultei</i>	
203	<i>Tirachioidea biceps</i>		271	<i>Lopaphus perakensis</i>	
205	<i>Phaenopharos struthioneus</i>		272	<i>Spinohirasea bengalensis</i>	
208	<i>Tirachioidea jianfenglingensis</i>		273	<i>Ramulus irregulariterdentatus</i>	
210	<i>Lopaphus (Myronides) magnificus</i>		274	<i>Dyme mamillata</i>	
211	<i>Cuniculina</i> sp. BANGLADESH 12		275	<i>Lobolibethra panguana</i>	
212	<i>Pylaemenes mitratus</i>		276	<i>Sipyloidea menepolemus</i>	
213	<i>Malacomorpha jamaicana</i>		277	<i>Phryganistria heusii</i>	
214	<i>Diapherodes (Haplopus) jamaicensis</i>		278	<i>Phyllium (Phyllium)</i> sp. PHILIPPINES	
215	<i>Phaenopharos khaoyaiensis</i>		279	unidentified (Necrosociinae) Bauduin Thai 2	
216	<i>Medaura scabriuscula</i>		280	<i>Phanocles ploiaria</i>	
217	<i>Lopaphus trilineatus</i>		281	<i>Pterinoxylus crassus</i>	
218	<i>Clonaria luethyi</i>		282	<i>Lonchodes philippinicus</i>	
219	<i>Ramulus</i> sp. BANGLADESH 2		283	<i>Diapherodes venustula</i>	
220	<i>Malacomorpha cyllarum</i>		284	<i>Pharmacia ponderosa</i>	
221	<i>Sceptrophasma langkawicence</i>		285	<i>Hemiplasta falcata</i>	
223	<i>Rhamphosipyloidea philippa</i>		286	<i>Monandroptera acanthomera</i>	
224	<i>Parapachymorpha zomproi</i>		287	<i>Eucarcharus feruloides</i>	
225	<i>Clonaria conformans</i>		288	<i>Phasmotaenia australe</i>	

289	<i>Ocnophiloidea dillerorum</i>	
290	<i>Necrosia annulipes</i>	
291	<i>Lobolibethra</i> sp. LIMA, PERU	
292	<i>Anchiale stollii</i>	
293	<i>Pseudophasma phtisicum</i>	
294	<i>Carausius detractus</i>	
295	<i>Acanthomenexenus polyacanthus</i>	
296	<i>Mnesilochus</i> sp. SANGIHE SULAWESI	
297	<i>Hypocyrtus vittatus</i>	
298	<i>Megacrania phelaus</i>	
299	<i>Neophasma subapterum</i>	
300	<i>Phasmotaenia spinosa</i>	
301	<i>Brasidas foveolatus</i>	
302	<i>Matutumetes amoenus</i>	
303	<i>Orxines xiphias</i>	
304	<i>Malacomorpha guamuhayense</i>	
305	<i>Mithrenes</i> sp. PAGSANJAN FALLS, LUZON, PHILIPPINES	
306	<i>Megacrania batesi</i>	
307	<i>Lamponius scythrus</i>	
308	<i>Onchestus rentzi</i>	
309	<i>Asystata</i> sp. QUEZON PHILIPPINES	
310	<i>Periphetes forcipatus</i>	
	<i>Achrioptera fallax</i>	
	<i>Achrioptera punctipes</i>	
	<i>Baculonistria alba</i>	
	<i>Calynda coronata</i>	
	<i>Carausius globosus</i>	
	<i>Chondrostethus</i> sp. "Red legs"	
	<i>Cranidium gibbosum</i>	
	<i>Dares</i> sp. CROCKER RANGE	
	<i>Dinophasma alimbiuni</i>	
	<i>Dinophasma</i> sp. CROCKER RANGE	
	<i>Dyme bifrons</i>	
	<i>Dyme ramulus</i>	
	<i>Dyme</i> sp. PERU	
	<i>Eurycnema osiris</i>	
	<i>Graeffea leverii</i>	

	<i>Hermarchus leverii</i>	
	<i>Lamponius dominicae</i>	
	<i>Lamponius</i> sp. LAOS	
	<i>Manduria systropedon</i>	
	<i>Mearnsiana bullosa</i>	
	<i>Megacrania tsudai</i>	
	<i>Mnesilochus bushelli</i>	
	<i>Mnesilochus latifemur</i>	
	<i>Mnesilochus</i> sp. MATUTUM	
	<i>Mnesilochus</i> sp. NABUNTURAN	
	<i>Neopromachus muticus</i>	
	<i>Oreophoetes peruana nigripes (topoensis)</i>	
	<i>Paracalynda picta</i>	
	<i>Paracyphocrania lativentris</i>	
	<i>Paraphanocles keratoskeleton</i>	
	<i>Phanocles</i> sp. "DURANGO" Esmeraldus	
	<i>Pharnacia kalag</i>	
	<i>Pharnacia</i> sp. PALAWAN	
	<i>Phasmotaenia spinosa</i>	
	<i>Phobaeticus magnus</i>	
	<i>Phraortes bicolor</i>	
	<i>Phraortes illepidus</i>	
	<i>Phyllium celebicum</i> SULAWESI	
	<i>Phyllium jacobsoni</i> JAVA	
	<i>Planudes</i> sp.	
	<i>Pseudophasma esmeraldas</i>	
	<i>Pseudophasma putidum</i>	
	<i>Pseudophasma quitense</i>	
	<i>Pseudophasma</i> sp. PERU	
	<i>Ramulus philippinicus</i>	
	<i>Stenobrimus bolivari</i>	
	<i>Stheneboea tuberculata</i>	

Name:.....

Date:.....

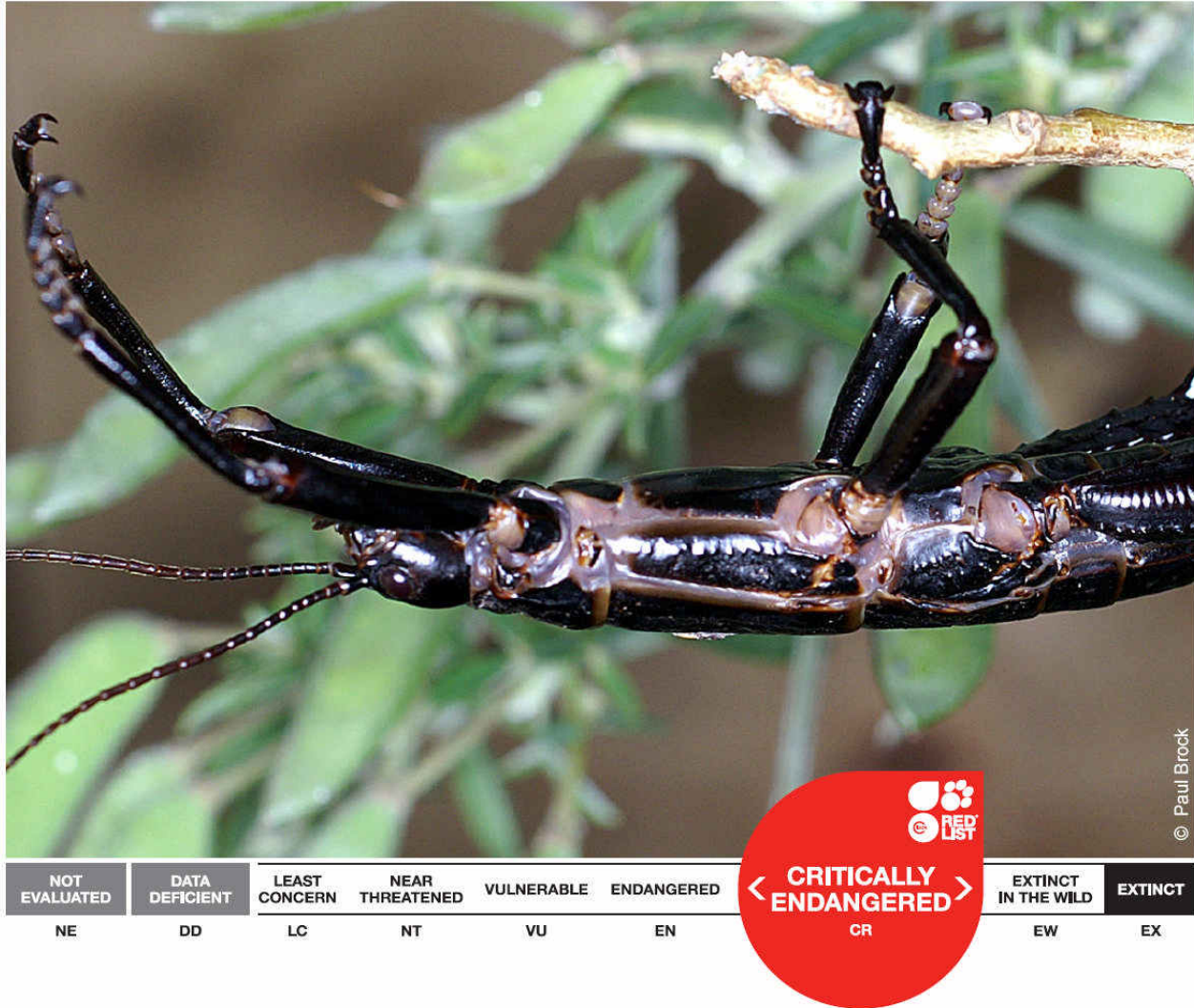
E-mail address:.....(if you want the result by e-mail)

Please send this form before the 15th of July to:

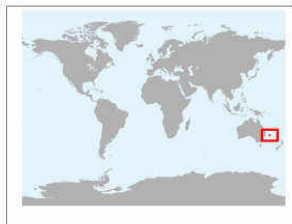
Tim Bollens, Driesbos 19, 2200 Noorderwijk (Belgium) or email to: tim.bollens@pandora.be (you can find this list online at www.phasma.eu)

Thank you very much for your cooperation! Tim Bollens, Kristien Rabaey & Rob Simoens (Phasma), Ian and Mark Bushell (PSG), Oskar Conle, Frank Henneman, Bruno Kneubühler (www.phasmatodea.com), Yannick Bellanger (Phasmania)

IUCN Species of the Day (30/06/2010)



© Paul Brock



Geographical range

Species of the Day: Lord Howe Island Stick Insect

The **Lord Howe Island Stick Insect**, *Dryococelus australis*, is listed as 'Critically Endangered' on the IUCN Red List of Threatened Species™. It is known only from Lord Howe Island and Ball's Pyramid, a volcanic outcrop in the Tasman Sea just 200 m wide at the base. Young nymphs are bright green in colour and become darker as they grow, eventually turning a dark glossy brown or even black. Females are larger than males and can reach 13 cm in length.

www.iucnredlist.org
www.arkive.org

The introduction of predatory black rats to the island by the trading vessel SS Makambo in 1918 led to the extinction of the species on Lord Howe Island, possibly as early as 1920. The Lord Howe Island Stick Insect was considered extinct in 1986; however, a small number of this species had survived on Ball's Pyramid. Following research in the early 2000s, a pair was taken to begin a captive breeding programme.

This species is being reared successfully in captivity, and there are plans for a reintroduction to Lord Howe Island if the eradication of the rats is successful.



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Book Announcement: Silent Summer: The State of Wildlife in Britain and Ireland

Judith Marshall (Chairman)



Published by Cambridge University Press. Edited by Norman Maclean, University of Southampton.

ISBN 978-0-521-51966-3

The editor explains that this book is designed to appeal to people with a general interest in wildlife and concern for its future, and also to provide an authoritative reference for students of biology, conservation, ecology and environmental science on what has happened to wildlife in Britain and Ireland over the last 50 years. The 36 chapters aim to give an accurate appraisal of changes in a wide range of wildlife species and their habitats, to outline urgent priorities and provide some insights into what is likely to happen.

Phasmida are of course included in chapter 29 on 'Grasshoppers, crickets and allied species', an example of a group whose presence in the UK is both increasing in numbers and spreading to other localities. Space was very restricted, so the only orthopteroid species illustrated is the brachypterous Southern Oak Bush-cricket, *Meconema meridionale*. This species has been colonising southern counties since its first discovery in Surrey in 2001, my first sighting was in my garden in Hampshire in 2006. When you are out collecting foliage for your phasmids from late August onwards, please keep a look out for this new resident. Nymphs are very similar to those of the Oak Bush-cricket, *Meconema thalassinum*, the species can only be identified with certainty as a very short-winged adult – see photograph.

New records of orthopteroid insects are always welcome, and particularly now, as a new atlas is planned, for further information see <http://www.orthoptera.org.uk/>

Spermatophores from PSG 301 *Brasidas foveolatus*

Phil Bragg (Phasmid Studies Editor)

While cleaning out a cage recently, I found six spermatophores on the floor of the cage. The only insects that have been in the cage since it was last cleaned out about six weeks ago (and for the previous six months) are two males and one female of PSG 301, *Brasidas foveolatus* (Redtenbacher, 1906), so there is no doubt that they produced these spermatophores. After collecting them, I photographed the spermatophores, and also photographed them next to one of the adult males.

The spermatophores are similar in structure to those produced by *Aretaon* and *Haaniella* (Bragg, 2001: 29-30). This is the 22nd species to be recorded producing a spermatophore; there is a list of species known to produce spermatophores on the PSG website.

References

Bragg, P.E. (2001) Phasmids of Borneo. Natural History Publications (Borneo), Kota Kinabalu, Sabah.
PSG Website, Spermatophore page: <http://phasmid-study-group.org/content/Spermatophores>



Male *Brasidas foveolatus* with spermatophores.



Six spermatophores of *Brasidas foveolatus*.

More on *Extatosoma*

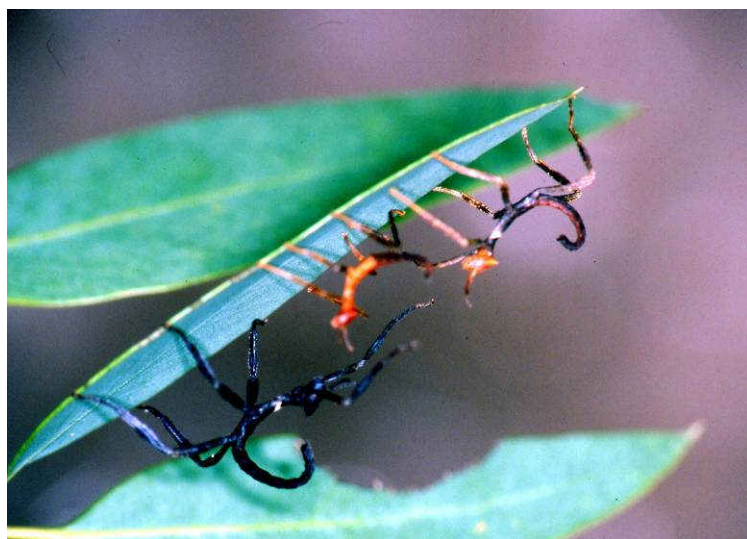
Ian Abercrombie

The Article about *Extatosoma tiaratum* in the last Newsletter by Paul Brock and Jack Hasenpusch was very interesting and casts a little light on the causes of variation in these insects, I should like to add a little more to our knowledge of this fascinating genus.

About ten years ago I was in the happy position of breeding three "species" of *Extatosoma* at the same time and was in a position to compare eggs, nymphs and adults at the same time.

The *E. popa* I had obtained from New Guinea, the *E. bufonium* from Australia and the *E. tiaratum* was the old PSG stock.

The eggs show considerable differences in the eggs of all three species, even accounting for the general variation of eggs from individual females from within a species, although the eggs may differ in size and colour the capitulum and micropylar plate are generally exactly the same, the only times that I have seen differences is when the egg has been deformed within the egg laying duct or ovipositor of the parent insect.



When looking at the pictures of the ova it will be seen that the egg of *E. popa* is much larger and has a pointed capitulum and the micropylar plate has a very distinctive cross piece, the egg of *E. tiaratum* has a straight sided capitulum and just a rounded bulge on the micropylar plate whilst the egg of *E. bufonium* although smaller than both, seems a mixture of both, with a pointed capitulum and a bulged micropylar plate.

All the nymphs when hatched showed exactly the same behaviour in that as soon as they were free of the egg they went into demented ant mode and ran about for about three days before they settled down to feed. The colour between the species were consistently different between the three species with the *E. popa* nymphs very large and black with a white collar, the *E. tiaratum* very dark with a red head and the much smaller *E. bufonium* with red head and thorax and dark abdomen. I took these different colour differences to mimicry of whatever ant species that were common in that area and perhaps they had a symbiotic relationship with, (as there are several papers on this subject I shall not go into it here). I took lots of slides of the nymphs trying to get a picture of all three species together for comparison but as you can imagine three nymphs in demented ant mode are very difficult first to keep still and then get into focus! I think I got through three rolls of slide film and still was not satisfied with the results, it cost me a fortune! The best of these slides is shown with this article and I apologise if the specimens appear a little out of focus.

I was very successful in rearing all three species to adults, with the *E. popa* being much the larger at first but after a few generations becoming smaller and ending up the same size as the other two. The *E. tiaratum* were much the same size as they had always been and surprisingly the *E. bufonium* grew just as large as the *E. tiaratum*, this may be explained by the PSG stock of *E. tiaratum* having been in captivity for many generations whilst the *E. bufonium* eggs were fresh from the wild.

The adults of *E. popa* and *E. tiaratum* were coloured the usual buff fawn colour with a few darker or lighter, the adults of *E. bufonium* were a very pretty light green, I put this colour difference down to the food plants I fed them, with the *tiaratum* and *popa* getting mainly Eucalyptus and the *bufonium* being fed on Oak, Hazel and Sweet Chestnut. I have since been told that if you feed *bufonium* on Eucalyptus as nymphs they will take on the buff fawn colour.

The adults were all very similar, particularly the *tiaratum* and *bufonium* and I came to the conclusion that they were so closely related that one was either a sub species or just a local variation of the other. The *E. popa* was very different in the first generation but quickly become almost indistinguishable from the other two. Although I distributed a large amount of eggs to members both *popa* and *bufonium* appears to have died out although I suspect that they have simply been absorbed into the general stock of *tiaratum*.

In the course of time and as more data is collected of this genus it may well be decided that there is only one species of *Extatosoma* with subspecies and local variations and many variations according to weather conditions and preferred food plants where each variant occurs.

