

The Phasmid Study Group

CHAIRMAN: Judith Marshall.

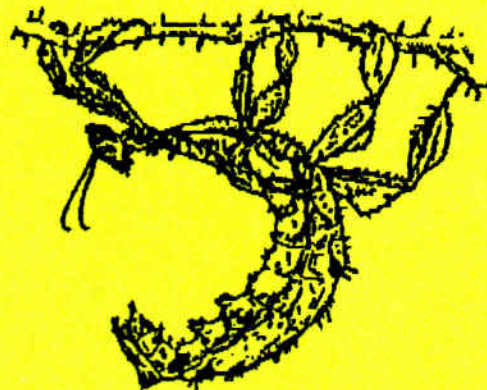
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MARCH 1999

NEWSLETTER No 78

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Extatosoma tiaratum PSG 9
Daniel Hallett

DIARY DATES 1999

MAY 16th, THE BRITISH TARANTULA SOCIETY SHOW.

Wood Green High School, Wood Green Road, Wednesbury, West Midlands.

The venue for this show is only 2 minutes from Junc. 9 of the M6.

10.30 - 17.00 hrs. Admission: £2.00 adults; £1.00 children.

JULY 10th, WEST OF ENGLAND CREEPY CRAWLY SHOW

Newton Abbot Racecourse, Devon.

JULY 18th, THE BIRMINGHAM REPTILE, AMPHIBIAN and TARANTULA SHOW

Comers Farm Leisure Centre, Northfield, Birmingham,

1100 - 1700 hrs.

JULY 24th, PSG SUMMER MEETING.

The Palaeontology Demonstration Room, Natural History Museum, London.

SEPTEMBER 11th and 12th, COUNTRY SIDE CAVALCADE

Southwest and Bath Showground, Shepton Mallett, Somerset.

We usually exhibit on the Sunday (12th). Please contact James & Nichola Waddicor for more details.

NOVEMBER 21st, WEST OF ENGLAND CREEPY CRAWLY SHOW

Newton Abbot Racecourse, Devon.

DIARY DATES 2000

JANUARY 22nd, PSG A.G.M.

The Palaeontology Demonstration Room, Natural History Museum, London.

The Phasmid Study Group has been invited to exhibit at some of the above Shows. If you would like to help run our stand, please contact the member named or Paul Jennings at 89 Brackensdale Avenue, Derby, DE22 4AF, (☎ 01332 343477. If members are willing to run a stand at shows not mentioned here, please contact the Editor with dates, and remember to send in a review if you have attended a show. If you require Membership Forms these are available from the Editor.

Exhibition & Meetings Report

AG Annual General Meeting

This was held on Saturday, 23rd January in the Palaeontology Demonstration Room, The Natural History Museum in London. Unfortunately, the room we usually use had been double booked and consequently we had to use a smaller room for the main meeting, and the Palaeontology Demonstration Room for the illustrated talk by Kim D'hulster.

As there must have been well over 100 members and their friends attending, the smaller room was somewhat overcrowded which meant it was not very easy to conduct the business of the day. For this reason, only a brief summary by Officers is reported below. The talk given by Kim, who

had travelled from Belgium, was well attended, with the room being full to capacity. The illustrated talk on the stick insects in culture within the PSG was well presented and informative, and I am sure Kim could have gone on for much longer if it was not for the room being required for another lecture.

Treasurer's Report for 1998 - Paul Brock

1998 was a fairly typical year for the PSG, in that there were 227 lapsed subscriptions by the half year mark, causing a considerable amount of administration work for the committee. This was compensated for by new members during the year, mainly from the usual sources: information in books on phasmids, recommendations from members, insect exhibitions and via the internet (more than ever before). At last year's AGM it was agreed that there would be a "free" membership year in 1999 for paid-up members (following surplus income of circa £1000 in 1996/97), and it will be interesting to see what impact this has on the renewals for the 2000. However, returning to 1998, our membership numbers dropped to 496, 10 down on 1997; our first decline in membership for many years.

Sales of T-shirts and promotional material items during 1998 were relatively low, and there is scope to improve these. However, the Group's finances are in good order, with a surplus income for the year of £225.49, leaving a General Fund of £4188.83 (although this will be substantially reduced in 1999, as a result of less subscription income)

Members wishing to see a copy of the PSG accounts for the period up to 31st December, 1998, should send a SSAE to the Treasurer, Paul Brock.

Livestock Co-Ordinator's Report _ Ian Abercrombie

Ian would like to thank members that have sent spare ova and live insects to him during the past year, but, as is normal, the amount requested is far greater than the amount received in. For this reason, any future requests for livestock/ova will **only** be accepted in writing, and don't forget to enclose a stamped addressed envelope for your reply. Ian can no longer take requests for livestock or ova by telephone. If you do have any spare ova/livestock, please send all your spare to Ian, remember what might be a common species to one person, may be a starter species to a new member.

The following members were elected to the committee for the forthcoming year. This was proposed by Allan Harman and seconded by Michael Lazenby.

Officers elected to posts:

Chairman: Judith Marshall. Dept. of Entomology, Natural History Museum, Cromwell Road, London, SW7 5BD. Tel: 0171 938 9344. E-mail: j.marshall@nhm.ac.uk

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Committee members:

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Kim D'hulster. Kard, Cardijnlaan 21, B-9100 St. Niklaas, Belgium. Tel: 03/776 84 51.

Wim Potvin. Brusselbaan 7, 1600 St. Pieters-Leeuw, Belgium.

Mel Herbert. St. David's School, Ramstein, BFPO 109.

Jef Grainger. 15/16 8 Harvey Road, Cambridge, CB1 2ET. Tel: 01233 721525.

PSG Summer Meeting

The summer meeting will be held on July 24th in the Palaeontology Demonstration Room. Following the success of the "insect workshop" at last summer's meeting, we shall be repeating it again this year, with the species covered being *Lonchodes* sp. If you would like to bring along any exhibits, show a slide presentation or even just give a brief talk about your experiences with this fascinating group of insects, then please contact Paul Jennings with the details. There will be displays of set specimens from the Natural History Museum's collection on display.



COLOURING COMPETITION

The Colouring competition for Autumn 1998 was won by Penny Jackson, well done Penny. Unfortunately, there were not many entries. Still, we shall try again, and so with this Newsletter will be your next colouring competition and quiz. You have plenty of time to fill it in and get it sent back to your Editor, and we shall be putting them on display at the summer meeting, when judging will take place.

All those who entered the last competition managed to get all the questions right, so we know at least some members read the Newsletter. Once again, you will need to read this Newsletter to answer all the questions, but don't worry if you cannot do them all, it is only for fun. The real competition is the **COLOURING COMPETITION**.

Good luck and get colouring!



New E-Mail address

Your Editor, Paul Taylor, has a new E-mail address. The old Compuserve address will be no longer valid by the time you receive this Newsletter, therefore, if you have tried to contact me on my old address and have not received an answer, that is probably the reason.

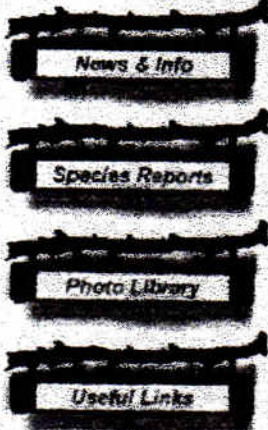
My new address is: PaulT@shustoke.swinternet.co.uk.

The Living World, Exceat

In an earlier Newsletter we did an article on The Living World at Exceat, in West Sussex. We regret to inform members that The Living World has now closed and we should like to wish Dave Rushen and his wife all the best in their retirement.

Places to visit

If you have an interesting place that you have visited that has insect/stick insect displays, why not send in the details to the Editor. With the summer vacations coming up, I am sure some of you would like to know places to visit, and if you have young children, places to take them to.



Welcome to **STICKINSECT.COM**, the website dedicated to the appreciation and preservation of stick and leaf insects (phasmids) and the official online home of the Phasmid Study Group.

The site, although currently under construction, is now available for members to access.

We plan to construct the largest and most comprehensive photo gallery on the internet as well as providing an extensive library of phasmid information, ranging from simple notes on keeping stick insects to detailed studies.

Welcome to our new on-line site

Information on our home pages will be available to members first through the Newsletters and Phasmid Studies, before being pasted onto our home page, so if you do not have a computer or internet access, do not worry, you will not miss out.

Any information members wish to put on the home page including photographs of stick insects, please contact your Editor first (Paul Taylor).

Other sites

Another site members may wish to access is <http://www.kis.ch/xedric>

This site has an English version and has pictures of dried phasmids from the Geneva Museum collection and information on breeding sticks as well. There is also information on the keeping of flower beetles as well as pictures.

Links will be made from our home page to other sites, links already available go to the AES page, Mark Watson's home page amongst others.

Guide to the genera of stick- and leaf- insects (Insecta: Phasmida) of New Guinea and the surrounding islands Heinz van Herwaarden .

This introductory guide to the taxonomy of the phasmids associated with New Guinea was recently published in Science in New Guinea 24(2): 55-114. It provides scientists and those interested in phasmids with a tool to identify the 58 currently known genera of Phasmida associated with the New Guinea subregion. With the use of keys, descriptions of the main morphological characteristics and schematic sketches the reader is able to smoothly identify species up to genus level. In addition, a complete overview of the 190 species occurring in the subregion (including the reference of the original description, sex of the

type material, illustrations, location of the type material, junior synonyms, and references to first description of opposite sex) is given. The paper has 17 black and white plates, and contains a glossary plus a gazetteer of all known localities of type and non-type specimens reported in the literature. Since the Journal "Science in New Guinea" is not widely available outside Papua New Guinea it was decided to put a digital version of the paper on the internet (on URL: <http://www.hvision.nl/~herwaar/phasmida.htm>).

Notes on PSG Species Oliver Zompro

PSG 183 *Gratidia* spec. Andamans: This species agreed perfectly with Wood-Mason's description and drawings of *Bacillus hispidulus*. The correct name is *Gratidia hispidulus* (Wood-Mason, 1873)

PSG 188 *Phaenopharos* spec.: When visiting the Muséum d'histoire naturelle, Genève, material of this culture compared with *Oxyartes spinipennis* Carl, 1913. It is definitely the same species and the name should be *Oxyartes spinipennis* (Carl, 1913). This species seems to be closer related to *Phaenopharos* than *Oxyartes*, and it may seem necessary to create a new genus. A paper is in progress. As long as it is published, it seems suitable to conserve Carl's placement.

Anthropophagous Stick Insects among Entomophagous People S. Eben Kirksey

The "Mee" (1) of Irian Jaya, Indonesia consume a variety of Orthopteroid insects as supplements to their staple diet of sweet potatoes (*Ipomoea batatas*), bananas (*Musa* species), and pork (*Sus scrofa*). The Orthopteroids which are eaten include nearly all local species of grasshoppers (Acrididae), mantids (Mantodea), and katydids (Tettigonioidea), but stick insects are notably absent from the diet of the "Mee". In fact the "Mee" are frightened by all species of phasmids, which they call kagabo. One grown man screamed and ran to the other side of the room when a kagabo that I was keeping in a plastic water bottle suddenly began moving around inside its domicile.

The "Mee" justify their fear by saying that kagabo can quickly fly through the air and grab on to you with their long legs and sharp claws. They said that if the "urine" of kagabo comes into contact with the skin it can cause an itchy rash all over the body that they liken to scabies. This fear of getting a rash may have a biological basis. According to Tom Clark of Kansas State University, there are a number of stick insects in various parts of the world that produce defensive chemicals via glands in their prothorax. These chemicals are either sprayed into the faces of attackers or oozed onto their bodies. For example, when the Peruvian Fire Stick (*Oreophoetes peruana*) is disturbed it ejects the volatile chemical quinoline, which has been shown to cause local irritation in frogs and spiders (2).

One older man told me a story about a particularly dangerous type of kagabo called ututu wawa:

A man and a woman went hunting in the woods. The man shot a pig with his bow and arrow. The woman went to look for tree fern leaves to steam as greens with the pork and she also looked for leaves to layer the steaming mound that would be used to cook the pork. While the woman was picking fronds off of a tree fern she spied a large red pandanus (3) fruit in a nearby tree. She stopped picking the leaves and went about getting the fruit down from the tree. She found a stick and used it to hook the branch that had the fruit on it. As she reached up and grabbed a hold of the leaves on the branch, suddenly part of the branch came alive. It was a huge kagabo with a red abdomen that she had mistaken for the pandanus fruit. The kagabo flew at her and bit her head off at the neck. It left her body lying on the ground but brought the head back up on to the branch to eat. When the man finished butchering the pig he grew impatient for his wife to return with the greens so he went to look for her. He followed her footprints and later her blood till he found the body. He searched around for the creature that had taken her head and then he spied the kagabo up in the tree. He shot it dead with an arrow and buried the kagabo and his wife together.

The man who told me this story said that some people believe that simply seeing this monster can kill you since once the spirit of the ututu wawa smells it will come later and eat you. Chad Arment suggested to me that it is possible that a phasmid has developed chemicals that are more toxic than those which have already been described. So it is at least conceivable that this species of stick insect has developed a toxin which can gradually kill a human.

Whether or not the beliefs of the "Mee" about the dangerous nature of kagabo have a biological basis, they give us an interesting perspective on the cultural construction of fear and danger. Although it is possible that one or two species have evolved a chemical defense secretion, it is highly unlikely that each species in this area has converged on this adaptation. The "Mee" have generalised their fear to the entire order of Phasmida based on empirical observations of a few phasmid species. In North America there are primarily two species of spider that have dangerous toxins: the Black Widow (*Latrodectus mactans*), and the Brown Recluse (*Loxosceles reclusa*). Many North Americans have a generalised fear of spiders that is similar to the "Mee" generalisations about kagabo.

- (1) The word "mee" means people, and I have chosen to use this term for the group that I worked with rather than the more widely known, but derogatory labels of Ekari, Ekagi, or Kaupauku.
- (2) Clare, Russ 1998 "*Insects' own moth balls*". Chemistry in Britain
- (3) These fruits are oblong in shape and can be up to three quarters of a meter long.

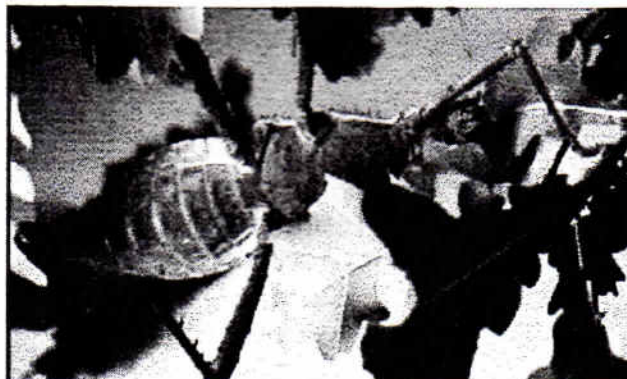
Many thanks to S. Eben Kirksey for presenting the above article for inclusion in the Phasmid Study Group Newsletter

Buying live phasmids - A warning Allan Harman

Over the past few years I have heard stories from various members of them having bought "exotic" phasmids from dealers. Two such cases involved pairs of *Heteropteryx dilatata*, this large phasmid is slow to mature, but relatively long lived. In both cases the members had paid in excess of £20.00 for an adult pair. In both cases the insects died within 2 weeks. The point I wish to make is that the average dealer has no intention of selling off stock that is egg producing (ie. Money in the future) so it is probable that in both cases the dealer knowingly sold insects that were past their useful (to them) lives.

If any members are considering buying at high prices, adult phasmids, beware. When the end is near they become less active; *Heteropteryx* has an extensive anti-predator behaviour, which they lose towards the end of their lives. Their antennae will also tend to droop forwards and the insect will stop feeding.

In any case, there are enough breeders of this species in the Group, so save your money and be patient.



Female *Heteropteryx* feeding on Oak

Problem Page

Some answers from previous problems:

Paul Brock's reply to some of the questions posed in the December Newsletter

Following Mike Smith's notes in Newsletter 77, I am starting a new year's resolution and responding to all the queries in that issue! Hopefully this may spark a debate about some responses but it is important to note that some rearers succeed with species whilst others do not, even when keeping them in similar conditions.

Having been asked numerous questions at PSG and other meetings/or in letters over the years, my AES book 'The Amazing World of Stick and Leaf-insects' (published January 1999 - details included with this Newsletter) includes a simple "trouble-shooting" page for rearers on p. 57. I have expanded this further in my book 'A Complete Guide to Breeding Stick and Leaf-insects' (TFH, in press) to include more serious problems, and Scott Talling's request on *Oreophoetes peruana* falls into this category.

The key piece of information in Scott's note is that the fern he used before the female collapsed "has a large amount of new growth". Even without such a clue, I would have concluded that most likely the insect had eaten a leaf sprayed with insecticide or it had eaten new leaves, which may contain poisons, before considering options such as inappropriate food-plant, or incorrect conditions. Why do leaves of such plants contain such poisons? In simple terms, it is a way of protecting plants from creatures which eat them and trying to ensure that some leaves at least mature; some insects have evolved in such a way that they eat certain parts of leaves in an effort to avoid the poisonous parts. Even when feeding insects on bramble, rearers may notice that insects prefer the mature leaves and eating very young leaves can cause death in some species.

Now a general comment - a pair of insects is not ideal for breeding purposes; try to obtain a few pairs to increase chances, just in case something goes wrong. Sometimes, phasmids do die for no apparent reason. *O. peruana* is a fairly easy species to rear, if kept warm and humid and, preferably, given two or more species of fern to feed on.

Gerhard Landauf's question on obtaining food-plants is a common one for rearers in cold winter climates. Usually it is possible to find bramble in sheltered woods in most of the U.K. all year round, but rearers in Finland and elsewhere have tried to use whatever evergreen leaves are available, with varying success. Gerhard could try to keep to breeding cycles so that nymphs and adults are around when leaves are available, or grow some 'reserve' plants indoors (although this species does have a large appetite!). If purchasing plants from garden centres or nurseries, you can always ask if insecticides have been used, or buy plants about a year in advance of intended use. Incidentally, *Extatosoma tiaratum* can vary considerably in size in culture and in the wild - females range from 105-150mm and selective breeding of larger males and females should help in rearing larger specimens. In Australia, I have seen green and whitish variations, rarely observed in European culture stocks - but that's another issue!

Mike Smith has posed some interesting queries. I shall try to deal with "What makes a stick insect a stick insect" in a concise manner! In classification terms, the insects are divided into a number of groups known as 'orders' by key features. Good insect books should list these, but I looked up Rick Imes 'The Practical Entomologist', Arum Press, London (1992) as an example of what members might use in a library, but his key to insect orders is inadequate as far as the phasmids are concerned! However, taking a short cut to the phasmids, they are usually regarded as part of the orthopteroid orders (which includes grasshoppers, crickets and their allies, mantids, cockroaches) and are straightforward to key to this grouping. In a good book, such as David Rentz's 'Grasshopper Country', UNSW Press, Sydney (1996) we find an accurate key to the orthopteroid insects - stick and leaf-insects are usually regarded as a separate order known as the Phasmida (and by other names, due to differing opinions). Phasmids differ from grasshoppers and some of their allies, because they lack thick hind femora suitable for jumping (there are other reasons); cockroaches are rather flattened, ovoid insects and mantids have fore legs modified for catching prey. Stick and leaf-insects are often elongate, but not always. The genus *Eurycantha* is a good example of broad-bodied,

'branch-like' insects. Stick-insects are a common name for the nearly all phasmids, except for the broad-bodied leaf-insects. For most of these insects the common name is very appropriate. There are always insects in any order which are "different" in appearance, but essentially they have the same key characteristics which make them a stick-insect, mantis, cockroach or whatever. Keys exist to distinguish families within the phasmids, which are further subdivided into subfamilies and tribes - these are used by taxonomists - scientists who study the classification.

For *Bacillus whitei*, see my 'Aliens' article in Phasmid Studies! Do not treat them like tropical insects - ideally they need dry food-plant leaves (do not spray the leaves or insects) and prefer to be kept cool, much like rearing British insects. Shedding of limbs (and perhaps the head decapitation mentioned) indicates incorrect conditions, perhaps too hot and humid; assuming no predators are present in the container.

On to food-plant diversity. Stick-insect species vary as to which plants they accept in captivity (which may be from a completely different family than their natural food-plants). In Europe, bramble, oak and gums, Eucalyptus spp. tend to be very useful - all from different families; in Asia, guava is widely used. Because rearers have reported success with certain plants, others tend to use them but, in reality, 100 different plants might be tolerated by a phasmid. One way of finding alternative food-plants is to check the plant family of natural food-plants. For instance, if it is in the rose family Rosaceae, you could try rose, pyracantha and others, in addition to bramble - the latter is often used because it is so convenient to find in quantity, all year round. Why will phasmids eat plants from different families? Simple, it is a way of continuing the species when normal food-plants are unavailable. Species which are not so tolerant will die! Let's consider an example of a successful insect - the Pink-Winged or Madagascan Stick-insect *Sipyloidea sipyilus* is an ideal example. I selected a type (original) locality of Java in 1995, as this was the nearest insect I could find to the Madagascan culture stock. I had doubts that Indian specimens were even the same species (although thanks to Nicolas Cliquennois (France) I have reared bisexual material from one of the original localities, the Sylhet region of Bangladesh - formerly in India. I now consider they are the same species, albeit with certain slight colour differences). Since obtaining eggs from other Asian specimens, I am convinced that the Madagascan insects are the same species as those from Bangladesh, Peninsular Malaysia, Singapore, Sulawesi, Sumatra and Thailand. Tony James recently found them in Mauritius also....are there some stick-insect fanciers in Madagascar and Mauritius? I am fairly certain that most of the following records are also accurate: Borneo, China, India, Japan, Taiwan and Vietnam. I cannot think of a more widespread insect! Reported food-plants are very varied, both in nature and in captivity.

Lastly, good old *Carausius morosus*; now a problem in South Africa also (see Phasmid Studies!). Planning is very important when rearing this species. Keep relatively few eggs if you want to keep stocks low. If you do have surplus adults or nymphs, and are very lucky, schools and individuals may respond to newspaper advertisements offering free stock. The same principles apply when breeding other species. Why would you need hundreds of adults of a species?

Martin Rowley solved his *Carausius morosus* problem this way.

Having read through the December Newsletter I would like to give some advice to whoever put in the problem page that they were having problems with getting rid of *Carausius morosus*.

At one time I was overrun with *Carausius morosus* but I solved the problem by donating them to Primary and Secondary schools. I found that most schools in my area did not have them because they knew nothing about them and were concerned about the costs. I set them straight and they were most grateful and just to make sure they were okay I went to see them once a week until there were no more problems. It helped that there was 7 primary schools in my area. If you have not tried this I hope it helps.

Questions

I am trying to locate some reference sources that key *Phyllium* species. I have obtained a recent copy of the stick and leaf insects of New Guinea but this was unable to cover the following species of *Phyllium*; *bilobatum*, *bioculatum*, *celebicum*, *giganteum*, and *pulchrifolium*.

I believe these species are Malay Peninsula or elsewhere. Could you provide me with some information on these species. Ideally, if you have any articles/journal materials/etc. I would like to request a copy of that pertinent information. I have exhausted the US resources. I would more than happy to compensate you for your time and resources or any help you may be able to give.

This information would help us greatly at the insectarium in id/breeding/conservation/taxonomy/etc. I look forward to hearing from you soon and thank you in advance for your time.

Christopher M. Wirth

Help,

Does anybody have an alternative foodplant suggestion for *Extatosoma popa*, I have no evergreen oak available here and the oak trees in this part of the UK do not have leaves yet. I would hate to lose this species just because I have no suitable foodplant.

Mark Watson

(A) Alternative foodplants for this species that I am using, and finding successful, are Eucalyptus and Bramble, but other members may have other ideas. (Editor)

Brief notes on rearing Phasmids on alternative food plants Lucio M. Coronel

Introduction

Several phasmids were tested during their entire development, feeding them on alternative food plants to know their survival rate, and also their growth ratio. Due to the need of finding alternative foods this experience was conducted with local available plants.

The species involved in this investigation were : *Neohirasea maerens* Brunner, *Baculum extradentatum* , *Aretaon asperrimus* and *Hermachus* sp. PSG No. 167.

Plants were too many to cite them all but those which prove to provide the better results are: Mulberry (*Morus nigra*), Hibiscus sp., Eucalyptus sp. and Avocado.

Each species was kept separate in plastic containers in accordance with their growth ratio.

Groups consisted of up to 10 cages with 10 - 15 specimens per cage, due to availability.

All specimens were kept in a heated room at 22- 24° C at 80- 90% humidity.

All species nymphs were started on alternative food plants.

Feeding was scheduled on an every third day basis.

Results are given in the following basis, **E**, excellent = all survived, **V**, very good = 90 % survived, **G**, good = between 70% 80% survived and **P**, poor if less than 50 % reach the adulthood.

Results

Aretaon asperrimus

Mulberry (*Morus nigra*) = E

Hibiscus sp. = V

Eucalyptus sp. = E

Avocado = V

Hermachus sp. PSG No. 167

Mulberry (*Morus nigra*) = E

Hibiscus sp. = P

Eucalyptus sp. = Not eaten

Avocado = Not eaten

Neohirasea maerens

Mulberry (*Morus nigra*) = E

Hibiscus sp. = V

Eucalyptus sp. = E

Avocado. = P

Baculum extradentatum

Mulberry (*Morus nigra*) = E

Hibiscus sp. = P

Eucalyptus sp. = Not eaten

Avocado. = Not eaten

Conclusion

Some food plants were found suitable to feed some phasmids sp., but this experiment is not definitive, so other PSG members are encouraged to try local plants and to communicate their results.

Some notes on rearing *Acrophylla titan* PSG 154 Allan Harman

The rearing of *A. titan* seems to cause some problems for members. I have successfully reared this attractive species for several years using the following method.

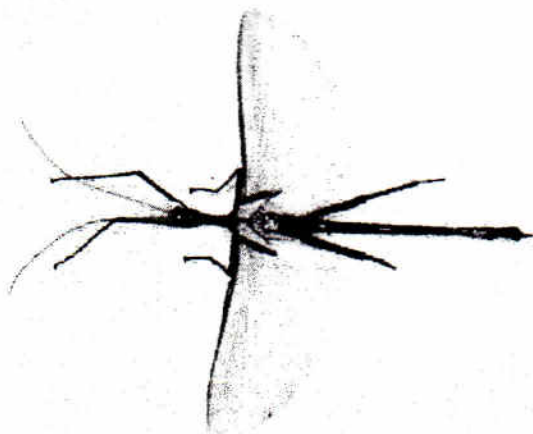
I incubate the eggs in clear plastic containers containing vermiculite which I spray lightly when required. It is advisable to not allow the substrate to dry out. On hatching I offer the young nymphs first shoots of *Eucalyptus gunnii*, a commonly grown garden plant readily available from Garden Centres throughout Britain. Be warned, however, the plant will grow well in gardens, and rapidly, but the root system does not go down very deep in the soil and the plants can have a tendency to blow over in windy situations. Depending on the numbers hatching after the second instar, I transfer them to a cage some 3 feet high with net sides. For food I place a potted *E. gunnii* and spray every day. It is better to have a number of potted plants to interchange as the sticks can very easily kill the plant by defoliation. I keep them at a temperature of about 70°F, 22°C.

I have found that as they mature they will take a variety of foodplants. One favourite plant is Hazel, *Corylus avellana*. Others found to be taken are the following: Cork Oak, *Quercus ruber*; Holm Oak, *Q. ilex*; Turkey Oak, *Q. cerris*; English Oak, *Q. robur*; Beech, *Fagus sylvatica*; Chestnut, *Castanea sativa*; and Hornbeam, *Carpinus betulus*.

One plant that I have found they will not eat is Bramble, *Rubus* sp.

Anyone rearing this species should really prepare well beforehand. Some 6 or 7 *E. gunnii* in pots with some planted out - they grow rapidly and require "topping" so they bush out.

Large cages at least 3' high are a must and in order to prevent too much humidity net sides are recommended. Although many Australian species are supposed to prefer a 'dry' atmosphere I have found that the insects do drink water from the leaf surface.



Female.

Podacanthus viridiroseus

Australia

From the Phasmid collection, Natural History Museum, London.

Young Member's Page



Welcome to the part of the Newsletter dedicated to the younger members of the Phasmid Study Group

If you have any articles you would like to send in, tips for other younger members, ideas for your page, then get writing.

Just send your contribution to your Editor, - you can even E-mail me.

Daniel Weatherall is 8 years old and he has written in to say he likes Action man, home computers and his pets. He has got a dog, a cat and a rabbit. His brother has tropical fish, but Daniel and his mom keep stick insects.

He got his first stick insects from somebody that his mom worked with and they are Indian Stick Insects.

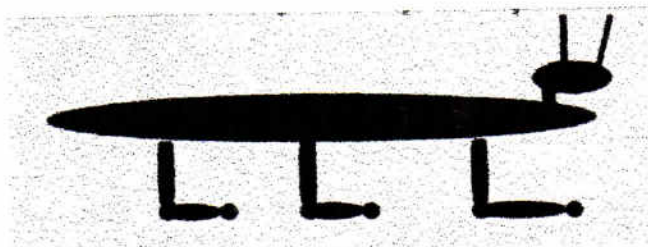
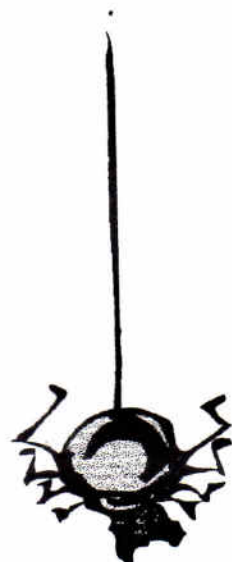
Daniel and his mom went to some pet shops to find other types of stick insects and at a pet shop in Manchester they found some Macleay Spectre and Jungle Nymphs. They would like to try some other species.

Useful Tip.

Don't forget to wash your bramble before putting into your stick insect cage.

Those nasty spiders will eat all your newly hatched nymphs if you don't send them packing.

Don't kill them, put them on your plants outside - they will help keep all the garden pests away.



Eggs are a traditional gift at Easter and Daniel is hoping that you can send him some stick insect eggs.

Daniel's address is 7 St. Vincent St., Barrow-in-Furness, Cumbria, LA14 2NR.

The following article, which is part 1 of 2 (the second part will be published in the June Newsletter) is from James Christie who keeps 15 different species of Phasmids and has been in the PSG for seven years.

James is doing the Silver Duke of Edinburgh's Award and his chosen "Skill" is Entomology. James has to keep a continuous log for a six-month period and has to write two articles for the Newsletter. The award book and participation card have been sent for verification by Paul Brock.

This is the first of James's articles.

Preservation of Phasmids

Since my interest in insects began almost ten years ago, I have always been interested in the preservation of specimens following death. Many of the species we keep seem, in my opinion, to be far too spectacular and interesting to simply discard after death, and this has led me to try several different means of preserving insects, with varying levels of success.

Initially, it was recommended to me that the smaller insects should simply be left to dry out and then pinned against a piece of cork which could be encased in some form of display case if required. I was informed that larger insects would require the removal of the internal organs followed by thorough desiccation before being treated in this way. However, shortly after attempting this with both large and small insects, I discovered that some of my specimens had been slightly eaten away. This was easily solved by securing a small mothball in the corner of each of my display boxes. However, my specimens quickly turned black, became brittle, and invariably legs subsequently fell off. As a result of this I searched for other methods. The most successful method I have tried has involved "pickling" the insect in a sealed jar of formaldehyde solution (Formalin). This appears to preserve the insect perfectly, with no obvious loss of colour (with the exception of *Phyllium* sp.) or deterioration over several years. However, having written an article for the PSG newsletter, recommending this to other members, Paul Taylor informed me that formaldehyde is a highly unpleasant substance, acting as a carcinogen together with being the cause of many other undesirable illnesses. Following this, I have ceased using this method, and the previously preserved items have been confined to the garage. At the time, there was no difficulty in obtaining Formalin from the local chemist; they were quite happy to sell me two litres of 37% formaldehyde solution. However, upon recently trying to obtain a new supply of Formalin, I have discovered that new legislation has been introduced in the last five years to restrict sales of this substance.

In an attempt to find an alternative method of preservation, I have looked at other fluid fixatives/preservatives due to the success I have had with Formalin in the past. One chemical I have come across, "Opresol", acts as a fixative (removes water from the specimen) in its concentrated state, and as a long term preservative in a diluted state. I currently have an adult female *Eurycantha calcarata* covered in concentrated Opresol, and am awaiting to see the outcome.

I have certainly found that the use of a fluid preservative is preferable to the more simple method of desiccation and pinning, and besides formaldehyde and Opresol, I am not really sure what substances exist for this purpose. I would very much like to hear from any members with suggestions of alternative means of preserving phasmids.

The Phasmid Study Group would like to wish James every success in gaining his Silver Award. Perhaps James could contact the Editor to let us know the outcome.

Stratford upon-Avon

Butterfly Farm

This is one of the insect houses that I most enjoy visiting.

With its large and well laid out butterfly flight area with lush landscaping, waterfalls and fish-filled pools and pleasant and helpful staff, the Stratford Butterfly Farm is reputed to be the largest in Europe. **Insect City** is where you observe the stick insects, beetles, leaf cutting ants, bees and many other creatures and you can get close to the deadly and dangerous in the safety of **Arachnoland**, home of the worlds largest spider.

The Butterfly Farm is located on the South Bank of the River Avon opposite the Royal Shakespeare Theatre and is only five minutes walk away from the Town centre. For the visitor by car, Stratford is easily accessed by the motorway system, with the M40 being the nearest. There is ample car parking within Stratford, but remember the Town can get really busy in the summer months with tourists, so my advice would be to go really early in the day.

Stratford-upon-Avon itself is a very interesting Town, made famous by being the birthplace of William Shakespeare. Regular open-topped buses will take you on a guided tour of the famous landmarks, including the out of town Anne Hathaways cottage, at a price of course. There are plenty of shops within the Town with restaurants, cafes and pubs being abundant, but again, remember, they can get very busy so if you want lunch, either go a little earlier or leave it till late. Prices can vary enormously, so once again, shop around.

But back to the Butterfly Farm. It is open every day (except Christmas Day) with summertime hours being 1000 - 1800 hrs., and winter hours 1000 - dusk. If you want more information, then you can contact the Butterfly Farm by telephoning 01789 299 288, Fax: 01789 415 878 and E-mail: Stratford_Butterfly_Farm@compuserve.com

Stratford Butterfly Farm. Tramway Walk, Swan's Nest Lane, Stratford-upon-Avon, Warwickshire, CV37 7LS.

Paul Taylor

PSG 101

Lamponius guerini

Female

drawing by
Daniel Hallett





WANTS & EXCHANGE

Wanted, nymphs or adults of the following species: PSG 7, *Clitarchus hookeri*; PSG 81, *Acanthoxyla inermis*; and nymphs only of PSG 13, *Acanthoxyla wuelfingi*.

Hopefully, I will have some spare nymphs of PSG 80, *Acanthoxyla geisovii* in the spring, please ask for details. Contact: Brian Laney, 5 South Close, Long Buckby, Northampton, NN6 7PX. ☎ 01327 843847.



Wanted, ova or nymphs of PSG 31, *Creoxylus spinosus* and PSG 73, *Phenacephorus cornucervi*. I have surplus PSG 9, *Extatosoma tiaratum*.

Contact: Mike Summerfield, 98 Ringway Road, Moss-Nook, Manchester, M22 5WE. ☎ 0161 498 0571.



Miss Raychell Langan has a large (48") cage for stick insects and would like some suitable insects to fill it. Please contact Raychell at 51 Rectory Road, Farnborough.



Wanted, surplus stock of PSG 4, *Sipyloidea sipyilus*.

Contact: Robert Penney, 34 Ardene Road, Timperley, Altrincham, Cheshire, WA15 6HJ. ☎ 0161 969 9010.

Handwritten note: "NO! yes. might get them." with arrows pointing to the word "yes" and the word "them". There is also a small drawing of a stick insect next to the word "them".

Handwritten note: "NO." with a small circle below it.

Wanted, ova/nymphs of PSG 38, 69, 99, 110 and 165. I am also interested in *Haaniella* sp. and related species. If any one can help, please contact Mike Haslett, 19 Flexmere Road, Tottenham, London, N17 7AU. ☎ 0181 808 9651 (1800 hrs. onwards)



Wanted: PSG 69 *Dares verrucosus*, PSG 38 *Dares validispinus*, PSG 70 *Haaniella scabra*, PSG 92 unidentified Sulawesi, PSG 100 *Lonchodes amauiops*, PSG 152 *Bacteria* spec., PSG 181 *Lonchodes hosei* ssp., PSG 184 *Necrosiinae* spec. Andamans, PSG 185 *Neohirasea* spec. Thailand, PSG 191 *Anisomorpha borelli*, PSG 193 *Prisomera malaya*.

Offer: PSG 195 *Sungaya inexpectata*, PSG 183 *Gratidia hispidula*, *Gratidia conformans*.

Only exchange against the "wanted" species.

Oliver Zompro (PSG1185), Helsinkistrasse 52, Germany. Fax: 49 431 523716, e-mail: stu41948@mail.uni-kiel.de



Mark Jackson has an abundance of *Baculum* sp. 157 (the huge Vietnamese species) and *Lopaphus caesius* nymphs (1st and 2nd instar as of March 99). If anyone would like some please send an SAE to Mark at: 5 Bridle Road, Whitchurch Hill, South Oxfordshire RG8 7PR.

PSG MERCHANDISE

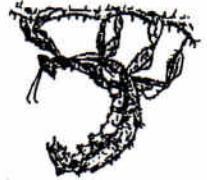
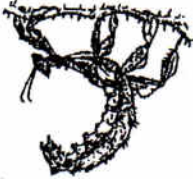
Pens & Car Window stickers are now available.

Prices are as follows:-

Pens 40p each + p & p

Car Window Stickers 60p each + p & p.

(p & p - UK mainland 25p; Overseas 40p)



Please send your order to: James Waddicor, 3 Squires Copse, Peatmoor, Swindon, Wiltshire, SN5 5HB, England. (Cheques should be made payable to "The Phasmid Study Group")

NEXT NEWSLETTER

Please send all contributions to the Editor:-

Paul Taylor, 24 Forge Road, Shustoke, Coleshill, Birmingham, B46 2AU, England.

☎: 01675 481578. to reach me by 1st May 1999 or preferably earlier

Contributions can be accepted in the following forms:

a. Hand-written. b. Typed c. On IBM compatible computer disk providing it is sent on a 3.5" double or high density disk. Files can be accepted as *Dos Text*, *Microsoft Word for Windows*, or as *ASCII* files.

E-Mail: PaulT@shustoke.swinternet.co.uk

All contributions to the Newsletter will be deemed to be submitted to the French GEPAI, the Belgian-Dutch *Phasma* and the German *Arthropoda* for translation.

NOTICE

It is to be directly understood that all views, opinions or theories, expressed in the pages of "The Newsletter" are those of the author(s) concerned. All announcements of meetings, requests for help or information, are accepted as bona fide. Neither the Editor, nor Officers of "The Phasmid Study Group", can be held responsible for any loss, embarrassment or injury that might be sustained by reliance thereon.

"The Phasmid Study Group"