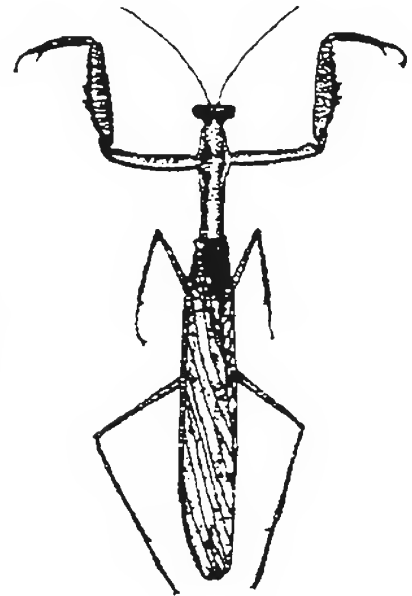


Mantis Study Group Newsletter 12

May 1999

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Editorial

Again, many thanks to Andy Lasebny for his large contribution to the newsletter. It is time for everyone else to start writing articles for the next issue! The next issue should be out in early August; however, this assumes that it is ready for printing in mid July, a delay of a day or two could mean it may not be out until mid or late September because of clashes with holidays. You have been warned!

Exhibitions

Dates to note are:

Saturday 10th July 1999 and Sunday 21st November 1999.

West of England Creepy Crawly Show, Newton Abbot racecourse, Devon.

Sunday 16th May 1999.

British Tarantula Society Show, Wood Green High School, Wood Green Road, Wenesbury, West Midlands (2 minutes from J9 of the M6). Open 1030-1630.

6th June 1999.

Oldham Creepy Crawly Show, Queen Elizabeth Hall, Oldham. Open 1200-1700. Adults £1.00 children free. We have not booked a table for this, if anyone wants to run a stand for the MSG at this event please contact me for more details.

Message from the Livestock co-ordinator — Jo Wheat.

I wish to say a special thank you to all who have returned your forms to me stating what you have available in the way of our special friends, the mantids.

I would just like to say that the role of the Livestock Co-ordinator is to put people in touch with others who may have surplus stock, oothecae etc. If someone contacts me stating that they require a certain species, I am more likely to be able to help if I know what is available at that time. Obviously it is an ever-changing situation due to the short lives of mantids. By returning these forms, and keeping me up-dated regularly on what you have available, I am able to set up a database which will hopefully help me to assist everyone expediently and accurately.

Some members have suggested that we print in the *Newsletter* what is available. This is a good idea in theory, but in practice it would not work. Due to lead times of publishing, by the time the *Newsletter* was printed the information would be out-of-date.

Fiction for the Mantis fancier! — Murray Eiland.

Trouble in Bugland: A collection of Inspector Mantis Mysteries by William Kozwinkle and illustrated by Joe Servello. Published by David R. Godine, Boston, USA (1983), 152 pages.

While searching in the library for references pertaining to mantids, I happened to come across this book which I checked out in an effort to be thorough. Although I realised that the book was designed for children, I was quickly impressed by the many excellent illustrations. Almost every other page bore a detailed line drawing, and a quick scan through the book shows ten wonderful colour plates. A summary in the beginning of the book aptly describes the contents: "A quick witted sleuth, patterned after Sherlock Holmes, displays his brilliant powers of deduction by solving five mysteries." The illustrations fit this theme, portraying a romanticised Victorian London populated by various insects in period dress. Not only do the drawings convey great imagination, but also an appreciation of the natural world.

The last story, the "Case of the Emperor's Crown" should appeal particularly to members of the MSG and the Phasmid Study Group, as Orthopteroid orders are well illustrated by Dr Hopper (Inspector Mantis' sidekick) and Walking Stick. I will not plunge into details of the plot of any of the stories so that I do not ruin the experience, but I found the book enjoyable, and I assume that it could be appreciated on many levels.

Mantids wanted — Robert Penny.

Deroplatys desiccata, or *Hymenopus coronatus*, or *Popa spurca* wanted: oothecae, nymphs of any size, or adults. Contact Robert Penny, Tel: 0161-9699010, or write to me at: 34 Arderne Road, Timperley, Altrincham, Cheshire, WA15 6HJ.

Affection in *Creobroter*? — Robert Penny.

Recently I have been getting my *Creobroter meleagris* out; when I look at him closely he jumps on my face, my female tends not to do this. It has turned into a bit of a trick: my family finds it quite amusing and I think it is too.

Mantis hunting in Borneo — Phil Bragg.

I spent two weeks at Easter in Borneo. Sadly I was not out collecting every night: I was working on my book *Phasmids of Borneo* (ISBN 983-812-027-8) which is due out later this year, and spent all my time in the publisher's office in Kota Kinabalu. However, I did go out collecting for three hours on my last night in Sabah. In addition to those found by active searching, I found one by chance.

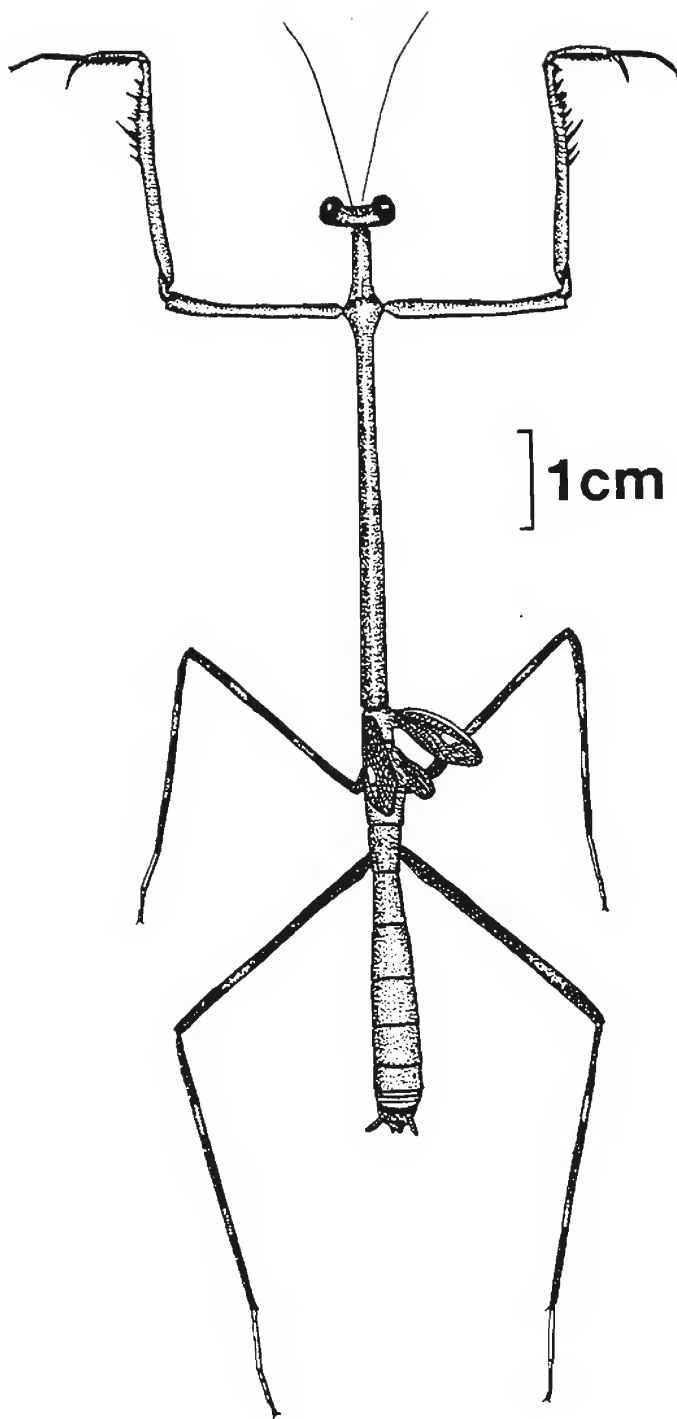
Returning from the office at 2230 on my second night I found a male *Tenodera fasciata* (Olivier, 1792) on the wall of the house in which I was staying. It had obviously been attracted to the lights under the car-port. This is not unusual, on previous trips I have often found mantids attracted to house lights: almost always males. What was unusual, or so it seemed at the time, was finding a *Tenodera*, a genus that I had not previously seen in Borneo. I have since been told that they are quite common in Sabah. Most of my previous collecting has been done in Sarawak, so it could be a species with a limited distribution.

On my last night in Sabah I went collecting along the Tambunan road, near Ulu Mayog (E 116° 17' N 005° 52'), a few miles outside Kota Kinabalu. Using a headtorch, I searched the vegetation along the roadside at various intervals along a five or six mile stretch of road,

stopping for 10 or 20 minutes each time then driving on to the next convenient stopping place. Within a few minutes of the first stop I found an adult female *Tenodera fasciata* confirming what I had been told about the abundance of this species in Sabah! She was hanging on to the underside of a leaf of a small tree. At the same stop I found a penultimate instar female *Euchomenella heteroptera* (de Haan, 1842), again hanging on the underside of a leaf. At the next stop I was delighted to find an adult female *E. heteroptera* amongst some dried grass on the roadside verge. Over the last ten years I have encountered many males of this species, probably in excess of 40, but these two females are only the third and fourth that I have ever seen. The males are often attracted to lights; since they have a very thin, light-weight body the males fly well, unlike the females which are flightless. At about the fifth stop I found a small, slender, green nymph which I assumed was a first instar nymph. Subsequent stops produced no more mantids, however, four in three hours is not bad, particularly since two were adult females.

The male *T. fasciata* was killed and set the following morning; I discovered many years ago that it is generally not worth keeping single males alive, particularly in the early part of a

trip. The other four mantids were brought back to the UK alive. They are all feeding and appear to be thriving. The two adults have both laid an ootheca although both are smaller than expected: the *T. fasciata* laid during my return flight, and the *E. heteroptera* laid on the following day, which may explain the small sizes. The small nymph has moulted and is now 14mm long, it is feeding on fruit flies; it is probably *Leptomantella* sp., a common genus of slender mantids in Borneo, reaching about 2.5cm as adults.



Female *Euchomenella heteroptera*.

Mantis 98 - The 1998 USA mantis season (continued) — Andy Lasebny.

[Following on from Andy's article in *MSG Newsletter*, 10: 5-15.]

November 6 - *Tenodera angustipennis* female, the one I found in August, makes her third egg case. She is in good shape, and is still very active. The male, on the other hand, is showing signs of aging. He eats very little, and often strikes and misses. He also drinks a lot of water.

November 7 - Green female *Mantis religiosa* makes her second egg case. She is in relatively poor shape - both tarsi on the forelegs are missing, and she does not eat well any more.

November 8 - *Sphodromantis lineola* female #1 makes her second egg case. All the females of this species appear long overdue for another egg case, and do not eat as well as they should. They are still relatively young, being adults for only two and a half months. The original green female I received in April is only now beginning to deteriorate and slow down. All this time she was an excellent eater, chasing down her prey. The other females hardly move. I usually have to hand feed them, and they are not even finishing their crickets. The original one could eat several in a row. The male is still alive, and eats about twice a week, but only if hand fed, and approached from the correct angle. Otherwise, he does not go after the crickets.

November 10 - The newer *Tenodera angustipennis* female has made her third egg case in captivity. I have never seen a mantis make egg cases so frequently - less than 2 weeks apart. She is very active and eats very well.

November 15 - An unusually warm Sunday morning. The day before was a bit above average, but today is still warmer. At around noon, I walk into town to get newspapers. On the way back I walk by a few gardens - one has a grasshopper in it, unusual so late in the season. I keep walking towards the ocean, and as I walk along the street closest to the ocean, I look at the vegetation in various gardens. In the garden of a very large old house, about 8m from the sidewalk, I see a light, dull green object on top of a dark green Japanese yew shrub in full sun. I go up on the lawn for a closer look, and it is a mantis - it just finished a meal, probably a wasp. I pick it up and see that it is a green female *Tenodera angustipennis* - the first one of this species I ever saw in my town. I immediately take her home. This is only one day earlier than the last mantis of the season was found last year, only a few houses away from here. There still has not been any frost near the shore, though some nights have come close. This is one of the lucky few survivors, who happened to be in just the right place where there is enough food and shelter this late in the season.

November 16 - The new mantis is doing well, and eats well. However, two of the captives have died today. One of the male *Tenodera aridifolia sinensis*, who was not doing too well the past few weeks is dead. This is about normal for a male of this species I guess. The other nearly identical male is still eating well though, and shows little sign of deterioration. The other dead one is *Sphodromantis lineola* female #2 - she has been sluggish for weeks, and was long over due for an egg case. She kept eating and getting fatter, but did not or could not make an egg case. The past week or so, she ate very little, and moved very little. What could be going wrong here? She should have lived for many more months. Maybe she was egg bound. I examine the abdomen, and it does not appear to be falling apart the way the other female's did. But when I cut it open, gray fluid comes out, along with a very strong, unpleasant odour. I remove all the contents of the abdomen, and not a single egg is present, just a gray, rather uniform substance and liquid. What is going on here?

None of the other species appear to be affected by this. This is very similar to what happened to the other female who died. The original green female I received in April, has not eaten for over a week, and barely moves, so she does not have long to live either, but this is to be expected, since she is very old and has made 10 egg cases. The other two should have lived. None of these ever want to drink, unlike the two *Tenodera* species, which drink water every time I spray some into their cage. Maybe they need more humidity? The female who was spitting out the brown fluid and seemed to be sick, is doing better and eating relatively well. I will see what happens with her. The female *Tenodera aridifolia sinensis* makes her third egg case on this day, and this one is as large or larger as the previous two. Finally - she attaches it to a twig instead of the lid of the cage. She is still in great shape as well.

November 17 - The original green female *Sphodromantis lineola*, who has not eaten for well over a week, suddenly became interested in food. She gradually stalked a cricket and ate it. This seemed to give her some energy, and she began to walk around inside the cage, after spending a week or more in exactly the same spot. Maybe she is not ready to give up yet. She must be almost a year old by now, assuming that when I got her on April 4 she had been an adult for at least two weeks, so she must have hatched in November 1997, assuming it took her four months to become an adult.

November 18 - The brown female *Mantis religiosa* is not doing too well - she is well overdue for another egg case, and cannot make one. She is weak, and tends to wander about the cage, as if no twig I provide is adequate. Putting her in different size cages with different set ups has no effect. She now seems to be having a hard time hanging in the proper upside down position that is needed to make an egg case. She probably will not last long. The male *Sphodromantis lineola*, which was a poor eater most of his adult life, has been eating better than ever the past week. He even goes after crickets, instead of waiting for them to come close. He will eat a small cricket nearly every day now, instead of once or twice a week. I wonder what all this is about. The newly found *Tenodera angustipennis* female is very restless tonight, trying to get out of the cage. I let her out of the cage into the room, and give her a cricket. I let her wander around the houseplants all night, which seems to satisfy her, and I put her back into the cage in the morning. This species appears to be the most active of all the ones I have.

November 19 - The first two female *Tenodera angustipennis* that I found both made their fourth egg cases on the same day - again. This exactly what happened on October 17 with the same two females. What is this - synchronized egg cases? These consistently make their egg cases underneath objects - in this case the right angle where two pieces of lumber join that make the cage, usually only a few centimetres from where a previous one was made and I removed from there. It's strange how the egg cases of this species are so completely different in appearance from those of the other *Tenodera* species, yet the mantids themselves look so similar that the average person would never be able to tell the difference, or even realize that they are looking at a completely different species. These egg cases are elongated and flattened, with a pair of lengthwise grooves, while those of *T. sinensis* are the more familiar rounded shape. *Sphodromantis lineola* female #5, who is very plump and almost ready to make another egg case, decides to drink a tremendous amount of water this evening. I never saw this species drink before. Every time I give them water, they just ignore it. This one always did as well, except today. She spent about a half an hour drinking droplets off the metal screen mesh lid of the 55 litre terrarium she is in. Why the sudden change in behaviour?

November 21 - That mantis drank a lot again yesterday, and today she is dead. I cannot understand what is happening to the females of this species. They all have what appear to be similar symptoms - they get plump, and cannot or will not make an egg case, weaken and die. This one too has the insides of the abdomen liquified, the same unpleasant and very strong odour, and no eggs at all. This was one of two *S. lineola* that were not even in the same room as all the others. They were in a 55 litre naturalistic vivarium, with tropical plants planted directly into potting soil, and a flat piece of cork bark dividing the tank into two parts. I do not think this is a disease, since no other species has been affected, and the original female was also unaffected. The other individual in the tank appears to be fine - so far. The brown female *Mantis religiosa* is getting weaker each day, and also cannot make an egg case. This seems to be more of a case of egg binding, and when this one dies, I am almost sure that I will find eggs inside. The other mantis to die on this day is the lone male *Tenodera angustipennis* - but this was probably just the end of his lifespan anyway, so I am not surprised. The three females are still in good shape, and are still very active.

November 23 - The original green female *Sphodromantis lineola* finally died of old age. She just gradually faded away, and when I cut the abdomen open on this one it appeared completely normal inside. Though I do not know much about insect anatomy, I could see that there was some structure inside, unlike the other females who died too early. Also, there were eggs inside this one, and no odour at all. Is there a genetic problem with the others? Were they in-bred in captivity too long?

November 24 - The brown female *Mantis religiosa* is still lingering on, cannot make an egg case, and is in very poor shape. The ends of the legs have fallen off, and a part of the foreleg is missing. But when I gave her a cricket, she managed to eat the whole thing when I hand fed her.

November 26 - *Sphodromantis lineola* female #3, who was spitting up brown fluid last month and appeared to have recovered, is now dead. The same result - the insides of the abdomen were all a greyish liquid, and there are no eggs. The abdomen fell apart completely when I tried cutting it open. I can see a pattern here - the mantis becomes less and less active, eats infrequently, and when hanging upside down from the lid of the cage, the abdomen hangs down below the head, as if the mantis has no strength left to hold it up. All the other individuals, including these when they were healthy, would press their abdomens against the lid when upside down, and the head was below the abdomen at all times, even if the mantis got really fat. I am starting to notice this behaviour gradually occurring in female #1 as well, and I am afraid that she will not last long either. She seems uninterested in eating, and her abdomen is starting to sag downward whenever she is in a position other than vertical with her head up. She is also drinking a lot of water, like female #5 was before she died. This is all happening consistently after the second egg case - they do not seem to be able to make the third. This also makes me wonder if any of the previous egg cases they made will actually hatch. The last female, #6, appears to be still healthy, but who knows what will happen in the next week or so. The male appears to be unaffected by all this so far.

November 29 - *S. lineola* female #1, is now dead also, just as I thought it would happen. But when I cut open this one's abdomen, the results are slightly different - among all that same greyish brown liquid, there were actually a few eggs, near the ovipositor. The rest was all liquid. The female *Tenodera aridifolia sinensis* makes her 4th egg case, and *Tenodera angustipennis* female from southern New Jersey makes her 5th - since October 12. Why this individual makes them more frequently than the others is unknown. The female of

this species that I found on November 15, appears to be having difficulty making an egg case. I will just have to wait and see. Outside, it has been unusually warm the last few days, with high temperatures in the 60's fahrenheit. There has not been any frost near the coast yet, only inland. At noon, I go for a walk on this sunny day, and after less than ten minutes, I can't believe what I see - a brown female *Tenodera aridifolia sinensis* is on the doorstep of someone's house, trying to climb up the door on this warm day. I immediately take it, before someone opens the door and crushes it. This one is in average condition for its age, with both tarsi missing on the middle legs, and it is very thin. During the entire walk home it tries to eat my finger. Who knows when was the last time it ate. I give it a cricket as soon as I get inside, and it goes right after it. This lucky survivor had probably just crawled out from some nearby evergreen shrubs on the south side of the house, which are about 3m from the door. Any thoughts I had on November 3, that praying mantis season was almost over, were completely wrong.

December 1 - A day off from work, and I go for a walk on this also warm and sunny, but windy day. It's 1130 and as I pass by a hotel by the beach, I see something on the white foundation wall on the south side. As I get closer, it turns out to be a small female *Mantis religiosa* - in December! I take this one and feed her. The warm weather supposed to continue for the rest of the week, so praying mantis season 1998 is not over yet! This is by far the latest I had ever found a live mantis outside in New Jersey. This really shows how these mantids seldom get to live out their entire lifespans out in the wild here. Only on unusually warm late autumns like this one, in the best most sheltered places will a few lucky individuals actually come close to living out their actual lifespans. I can see egg cases of *Tenodera aridifolia sinensis* in various parts of New Jersey, on shrubs and plants that lost their leaves. The females who made the egg cases are long gone, once the shelter of leaves disappeared. The lucky ones are those who were on or near evergreens. For some reason, I never see the egg cases of the other two species. I do not know where they put them. I suppose that further south, in Virginia and North Carolina, these species, if present there, do get to live out their natural lifespans more frequently.

December 3 - *Tenodera angustipennis* female that I found on November 15 finally made the egg case she seemed to have trouble making initially. The last *Sphodromantis lineola* female's abdomen appears to be hanging a bit low when she is upside down on the lid of the cage. I hope this is not a sign of problems that may surface as they did in the other females.

December 4 - The first *Tenodera angustipennis* female I found in August made her fifth egg case. The one I found in October in southern New Jersey is spitting up dark brown fluid - I do not know why this sudden problem when she was so healthy and active. This may mean her days are now numbered.

December 6 - The last remaining *Sphodromantis lineola* female dies, just as I suspected she would, all with the same symptoms. This must be some sort of genetic problem, since only these were affected. It's the same pattern - unable to make the third egg case. As far as the fertility of the previous egg cases is concerned, I just heard from a Mantis Study Group member to whom I had given one of these egg cases, and it did hatch. The male is still fine.

December 7 - The female *Tenodera angustipennis* that was spitting up fluid is now dead. She seemed to be ready to make another egg case, and died after deteriorating rapidly. When I cut open the abdomen, I was amazed to find a situation similar to the problem I had with the *Sphodromantis lineola* females. There was a dark gray fluid inside, with less structure than normally would occur inside, but not as completely liquid as in the other species. But at least this one got to live out a relatively normal lifespan for this species, and

got to make a lot more egg cases than the other, supposedly longer lived species.

December 9 - One of the two male *Mantis religiosa* is dead, without any warning, just like last year. I guess these just die of old age very suddenly, instead of deteriorating gradually.

December 10 - The new female *Mantis religiosa* I found on December 1 made a small egg case. The night before was cold, with some frost, in sharp contrast to the record breaking high temperatures that occurred up until the 8th. It was 23°C on the 7th, now it is around 8-12°C as a high, with 0-3°C at night. There are few if any mantids left outside, though there maybe some in sheltered areas, who knows. It depends on whether or not they can get food during the late morning or early afternoon - there are very few suitable insects flying around now. I doubt that the last mantis I found would have had the chance to make that last egg case on this day if I had not brought her inside and been feeding her daily. The *Tenodera angustipennis* female I found in August died suddenly. She gave very little warning - just ignored all food for a day, and was dead the next. This one was active and in good shape right up to the end, with little sign of any deterioration like many individuals have.

December 12 - The *Mantis religiosa* female I found on December 1 dies suddenly.

December 13 - The female *Tenodera aridifolia sinensis* I found on November 29 makes a small egg case.

December 16 - The female *Tenodera aridifolia sinensis* I found on November 29 is now dead, with very little warning, though she was not in the best shape when I found her. She got a few more weeks than she would have got out there anyway. There are still a male and a female of this species left, both in reasonably good shape for their age.

December 19 - The remaining female *Tenodera aridifolia sinensis* makes her 5th egg case. I never had this species make so many. Usually it is only 3, and only occasionally 4 egg cases, never 5.

December 20 - The remaining *Tenodera angustipennis* makes another egg case, the second in captivity, since I found her on November 15. The female *Mantis religiosa* is dead, after eating very poorly and deteriorating the past month. The past 2 weeks she would eat very little, if at all, dropping the cricket after only a bite or two. If I gave it back to her, she would also only take another bite and drop it.

December 25 - The male *Mantis religiosa* is dead this morning. He did live longer than the 5 males I had last year.

January 3, 1999 - The male and female *Tenodera aridifolia sinensis* made it into the new year, as well as the female *Tenodera angustipennis*, which made a very small egg case today. This one is in very poor physical condition, with wings faded and tattered and torn, and legs not functioning too well. But alertness and feeding ability is still somewhat good. The male *Sphodromantis lineola* is also still alive, but he does not complete his meals any more.

January 6 - Both *Tenodera* females are now dead, quite suddenly, with little warning, other than being weak and sluggish the past 2 days. The male *Tenodera aridifolia sinensis* is still alive, but he does not have long either.

January 11 - The male *Tenodera aridifolia sinensis* finally dies. This is the longest lived male of this species I ever had. The *Sphodromantis lineola* male is still here, but he is drinking tremendous amounts of water, which means he may not last too much longer. It appears that mantids drink much more water toward the end of their lifespan than when they are younger.



February 1 - That *S. lineola* male is still hanging on. He has deteriorated greatly in the

past week. He cannot hold onto the branches well any more, since the tarsi have broken off or are dry and brittle. The only way to get him to eat for the past 2 weeks is to tie a cricket to a thread, approach him at just the proper angle and distance, and allow him to strike several times. If I would leave the cricket running around in the cage he would never catch it, since it takes several awkward strikes to catch it when tied to a thread. He did complete today's meal, however.

February 15 - He finally dies after lingering on for so long. Most males of most species I had did not deteriorate this gradually. Often they either died of old age without showing noticeable signs that they are about to die, or no more than a day or two of symptoms. Females seem more likely to gradually fade away for as long as a month. This male lasted a very long time after the initial signs of old age were beginning. I hand fed him his last meal on the 12th, and he did not take food any more the next day. He lived almost 10 months, and was an adult for 6 months.

Conclusion

This year, praying mantis season in New Jersey was typical of what happens most years, in that there are more *Tenodera aridifolia sinensis* sightings than that of *Mantis religiosa*, and this year the larger of the two species became adults in the wild right on time or a bit early. The only thing different was the appearance of the other New Jersey species, *Tenodera angustipennis*, a species I had not seen for quite a few years. The most unusual occurrence was finding live mantids in the wild up until the end of November and beginning of December. A few almost lived out their maximum lifespan in the wild. I have lived near the coast only since 1995, so I do not know, maybe this happens frequently in this part of New Jersey. I never even saw mantids in early November up north. The addition of the African *Sphodromantis lineola* to the captive mantis collection made for an interesting comparison, since they just happened to become adults at the same time as the New Jersey species did in the wild. The most puzzling of all is what happened to the *Sphodromantis lineola* females, all dying prematurely the same way after making the second egg case. Does anyone know what this could be?

	An Introduction to Rearing Praying Mantids by P.E. Bragg.	
An Introduction to Rearing Cockroaches by P.E. Bragg.		
Each booklet contains 16 pages and provides an introduction to housing, feeding and breeding the insects. Includes drawings to distinguish the sexes and examples of some different species.		
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Mantis abstracts

The following are abstracts from papers published recently, or in some cases details of the paper but without an abstract. The papers are in English unless otherwise indicated. The editor would be grateful for copies of any recently published papers so that abstracts may be included in this section of the newsletters.

Grandcolas, P. & Desutter-Grandcolas, L. (1998) Successful use of a deimatic display by the praying mantid *Polyspilota aeruginosa* against the yellow-vented bulbul. *Annales de la Société Entomologique de France*, **34**(3): 335-336.

No abstract available.

Scriber, J.M., Deering, M.D., Francke, L.N., Wehling, W.F. & Lederhouse, R.C. (1998) Notes on swallowtail population dynamics of three *Papilio* species in south-central Florida (Lepidoptera: Papilionidae). *Holarctic Lepidoptera*, **5**(2): 53-62.

South-central Florida (Highlands County) has experienced unusually intense wetland and wooded habitat loss due to agricultural, ranching, and developmental drainage programs since the 1960's. During the last 20-30 years, general declines have been observed in the numbers of swallowtail butterflies (*Papilio*), with the exception of woodland and hammock preserves such as Highlands Hammock State Park. Here we report the last 6 years of population size estimates of *Papilio glaucus*, *P. palamedes*, and *P. troilus*, the most common swallowtail butterfly species in this county. We found that the frequency of dark (mimetic) morph *P. glaucus* has remained high (31-44%) for the last 10 years for all spring and fall broods observed unlike the low proportions before the 1960's drainage projects. In addition, we report on lizard, spider, and mantis predation on large *Papilio* adults.

Yamawaki, Y. (1998) Responses to non-locomotive prey models by the praying mantis, *Tenodera angustipennis* Saussure. *Journal of Ethology*, **16**(1): 23-27.

Adult females of the praying mantis *Tenodera angustipennis* were presented with computer-generated images, and the attractiveness of "non-locomotive" prey models was examined. Mantids fixated and struck the "body and leg" model (consisting of an immobile black square on a white background with 2 black lines oscillating randomly at its sides) more frequently than the "leg" model (only oscillating lines) or the "body" model (static square only). This indicates that the model consisting of a static object and moving lines effectively elicits mantis strike behaviour, although it is "non-locomotive."