THE COLEOPTERIST'S NEWSLETTER

Number 7 February, 1982.

EDITORIAL. Despite the very poor weather, 1981 turned out to be a most productive year overall with remarkable additions to the British List for Chrysomelidae, Elateridae and other families - none as yet formally brought forward.

1982 sees the 'Newsletter' with a new Treasurer - Mr.P.J.Hodge of Ringmer. At the time of writing we have not completed to opening of a new bank account so for the time being, please send subscriptions to J.Cooter. The New Year sees your Editor, as usual, with very little copy - surely each one of you has some observation or practical tip worth writing up. Contributions need not be typed (I have to retype everything for duplication) but writing should be very clear ..... doubtless the lack of material results from the same old bogey that afflicts us all -- lack of time. Thanks to all those that have over the past months written in.

BIOGRAPHICAL DICTIONARY OF COLEOPTERISTS. With this issue Michael Darby has asked for his questionnaire to be circulated. I hope all of our readers will return this as Michael is compiling a very worthwhile and interesting reference source. In cases where no reply is forthcoming 'active Coleopterist' or similar will appear against that person's name. When filling in my own details - rather like making notes for ones own obituary - I thought in addition to date of birth, place of birth would be a useful addition, perhaps it would be a good idea to include this too.

Coleopterist's Newsletter. Editor and Secretary = J.Cooter, 20 Burdon Drive, Bartestree, Herefordshire, HR1 4DL. Treasurer = P.J.Hodge, 8 Harvard Road, Ringmer, Lewes, East Sussex.

FIELD MEETINGS. It is not much bother for me to arrange field meetings in my home county, especially when the participants have to find their own lodgings. However I can see attendance will fall if I keep pushing Herefordshire venues. Is there anyone out there willing to arrange a meeting for 1983 ?

RICHMOND PARK JUNE 19th & 20th, 1982. Anyone wishing to attend this meeting, please contact J.Cooter. A 10 inch to one mile map of the Park, costing 25p is available from - The Superintendent, Bog Lodge, Richmond Park, RICHMOND, Surrey, TW10 5HS

DOWNTON GORGE JULY 10th & 11th, 1982. This place is situated between Hereford and Ludlow, O.S. 'one inch' map sheets 137 or 148, 2½ inch sheet SO47. The gorge is an SSSI described as ... 'A wooded limestone gorge through rocks of the Ludlow Series (Silurian) in which runs the River Teme. Much of the woodland has been reafforested with conifers, but the steeper slopes of the gorge retain semi-natural broadleaved woodland of great interest. The herbaceous flora is rich in parts and includes uncommon species, whilst trees and roak faces support a rich lichen and moss flora with rare species. The site is regarded as being of National importance for Nature Conservation.'

My own observations from flying over the site (see what lenghts I go to in selecting good places !) show that most of the conifer planting is at the western end of the gorge, the eastern end being largely deciduous woodland. On foot, the eastern end is very accessible - scrambling up and down the gorge sides is not at all necessary - the river, wet lands and woodland all reached by forest tracks. The woodland contains oak, beech, wych elm, small-leaved lime with coppice hazel, hawthorn and so on.

The meering is being organised by Hereford City Musem - contact J.Cooter.

I am willing to organise a 'Coleopterist's Dinner' as per last year, and will probably have it again at the Compasses, Wigmore. We can thus turn up in field kit without upsetting anyone, and others will have the chance to see what must be, as Robert Angus pointed out, the only half-timbered nissen hut in Britain. Anyone interested, please let me know as soon as possible, and in all events by the end of APRIL.

AN UNFORTUNATE ABUNDANCE OF CARABUS PROBLEMATICUS Hb. s. GALLICUS Gehin (Col., CARABIDAE) at Dungeness, East Kent. Large Carabids are seldom encountered on the shingle bank of Dungeness, indeed during the many years that I have collected there (usually four times each year) I can only recall seeing one specimen. I was therefore surprised to find about fifty in each of eight pit-fall traps set out in a line a metre apart. There were rather more Carabus in those traps laid on the bare shingle than those sited on areas where a thin layer of soil and mixed grasses were present. The traps were placed during January 1981 and emptied monthly. The Carabus were present in maximum numbers on the 20th September none were seen in the previous months, but similar numbers were collected on 21st October whilst on the same date in November only one or two were found in each trap. Staphylinus olens Muller was found in numbers on most occasions. Two very local species were present in November: Acidota cruentata Mannh. and Licinus punctatulus (Fab.).

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(Although by no means numerically comparable to the case above, I was rather surprised to find Cychrus in two's three's and four's under logs in Brampton Bryan Park during 1980. Previous encounters with this species have always been singletons in any one locality. After reading Alex's note, I wonder how many Cychrus I might have obtained by the use of pit-fall traps -- J.C.).

SUBSCRIPTIONS 1982. THERE ARE SEVERAL SUBSCRIPTIONS OUTSTANDING. A REMINDER IS ENCLOSED WITH THIS 'NEWSLETTER' WHERE NECESSARY - NO FURTHER REMINDERS WILL BE SENT.

PRESENCE OF SPERMATOPHORES IN NEPHANES TITAN (Newman) (Ptiliidae).

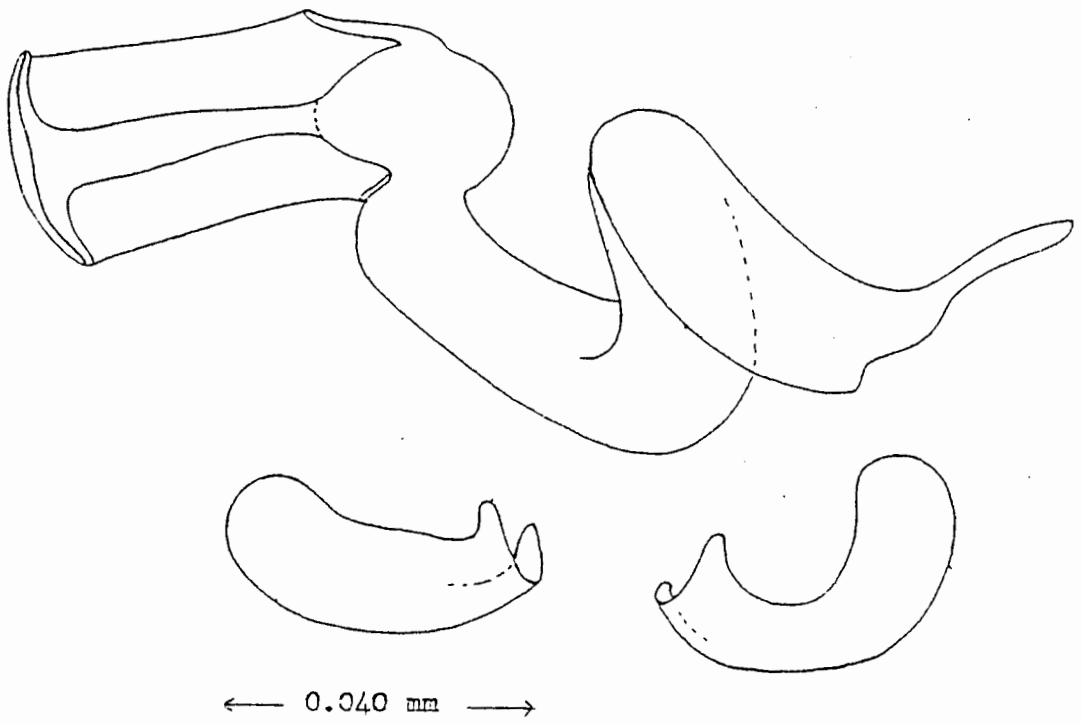
Although Crowson has suggested recently that sperm transfer in the majority of Coleoptera probably takes place by means of 'packages' called spermatophores (Biology of the Coleoptera, 1981;p114) the appearance of very few of these structures has been described. It seems worth recording, therefore, their presence in two males of Nephanes titan (Newman) which I took from a small pile of rotting grass at the edge of the Thames estuary at Funton in Kent in November 1981.

Twelve spermatophores appeared to be present in each insect. Each, as canbe seen in the illustration, was boat-shaped - although some were more curled up than others - with one rounded end and one blunt end, the latter bearing a single tooth-like projection on each side. All were transparent and only clearly visible using a high magnification (x1000), phase contrast optics and Hojer's medium as a mountant.

Interestingly the size of the spermatophores and degree of curling corresponds very closely to the curves of the female spermatheca. In a recent article 'Coadaption and taxonomic differentiation of sperm and spermathecae in Featherwing beetles' (Evolution,35(1), 1981, 168-174) the late Henry Dybas and his daughter Linda pointed out that sperm and spermathecae of each of the eight species of the invisibilis group of the Ptiliid genus Bambara in Sri Lanka appear to be coadapted one to the other. If the same is true of the spermatophore and spermatheca in Nephanes titan then spermatophores might prove a useful diagnostic character for separating males of the different species of Nephanes. Some dozen or so species have been assigned to this genus from different parts of the world but many more undoubtedly await description. Similarly spermatophores might prove helpful in the difficult genus Acrotrichis, which also reproduces by this means, the males of some species of which have proved inseparable to date on other characters.

Finally it is worth pointing out the work of H.Dybas, and of Victoria Taylor on genus Ptinella,which indicates that at least two mechanisms of sperm transference are utilised by the Ptiliidae, suggests that study of spermatophores could prove helpful in the complex task of constructing a phylogeny of this Family. Reproduction by spermatophores is considered by most authors to be more primitive than by free swimming sperm, and of the three methods of spermatophore production which Gerber ('Evolution of methods of Spermatophore formation in Pterygotan insects', Canadian Entomologist,102:358-62.) detected in the Coleoptera, that

involving their formation prior to copulation in a 'mould' in the ejaculatory duct of the male, he considered to be more primitive than those in which spermatophores were formed in the body of the female from materials provided by the male.



Nephanes titan (Newman). Female spermatheca and two spermatophores.

Michael Darby, 52 Avenue Gardens, London, W3 8HB (7th January, 1982).