

217

**REDISCOVERY OF *EARINUS TRANSVERSUS* LYLE (HYM.:
BRACONIDAE: AGATHIDINAE), A PARASITOID OF *TRICHOPTERYX*
POLYCOMMATA (D.&S.) (LEP.: GEOMETRIDAE: LARENTIINAE)**

MARK R. SHAW

National Museums of Scotland, Chambers Street, Edinburgh EH1 1JF.

Abstract

Recent rearings of *Earinus transversus* Lyle (Hymenoptera: Braconidae: Agathidinae), a probably host-specific parasitoid of the threatened moth *Trichopteryx polycommata* (Lepidoptera: Geometridae), are reported from Britain. This braconid wasp should be seen as an important conservation target as it had not been recorded anywhere in the world since being described from unprovenanced (presumably British) specimens more than 100 years old.

Introduction

Earinus transversus Lyle (Hymenoptera: Braconidae: Agathidinae) was described (in text that was unfortunately split over two years of publication: Lyle 1920-1921) from two females and two males in the Dale Collection in Oxford University Museum and a pair in the Cambridge University Museum. Lyle (1921) didn't express a view but the specimens can fairly safely be presumed to be British – he comments only that they are all “old” specimens, and that only two (both from the Dale collection) bear data labels which, however, he found indecipherable except for the date “1899” on one and words he read (unconfidently) as “ex Polycommata” on the other. If he recognised this as a host name he did not say so, and it has not been widely cited as such – for example there is no entry in Thompson (1944-1958), and Nixon's (1986) revision of European Agathidinae does not include it in the collated list of hosts he gives, although in the species entry he does suggest that Lyle may have been reading the host name *Trichopteryx polycommata* (Denis & Schiffermüller) (Lepidoptera: Geometridae).

Since its original description no further specimens – either in Britain or on the European continent – have been recorded, revisionary works and keyworks (e.g. Fahringer, 1937; Telenga, 1955; Tobias, 1986; Nixon, 1986) merely referring to the original material or to earlier reiterations.

The only apparent exception to this is material determined and recorded by Morley (1936) as *E. transversus*, which relates to specimens in his collection, now in Ipswich Museum, as follows: 1 ♀ labelled “Bred by Mrs Holmes ex *Eupithecia* sp.? on *Myrica gale* in New Forest 1908”; and 1 ♂ labelled “Tuck Tostock 7.vi.99”. [Rev J. G. Tuck was the vicar of Tostock, Suffolk, TL95 64 (D. J. Lampard, pers. comm.)]. However, I have examined these specimens and redetermined both as *Earinus gloriatorius* (Panzer). This leaves *E. transversus* completely unknown apart from the 6 specimens of Lyle's original description, which are all about 100 years old or more, despite its being a relatively easy species to recognise (e.g. Nixon, 1986).

Results

It is therefore a pleasure to put on record a series of four females and one male of *E. transversus* (now in the National Museums of Scotland) that emerged 14-20.iv.2004 (in an outdoor shed in Edinburgh; cf. Shaw, 1997) from their tough satiny white cocoons resulting from larvae of *Trichopteryx polycommata* collected by G. M. Haggett from wild *Ligustrum vulgare* at Cranwich, Norfolk on 28.v.2003 and sent to R. Leverton to be reared. Two other cocoons failed to emerge. The bulk of the larvae received by Leverton turned out to be parasitised by this solitary species but one moth was reared, confirming the identity of the larvae. In passing the resulting cocoons on to me in vii.2003, he remarked (in litt.) that the host larvae had seemed less than half grown when they entered the substrate provided to construct pupation chambers, almost as though this had happened an instar early. However, I have measured the head capsules of five of the prepupal host remains left by the parasitoid larva, and all were within 85-95 % of the width of the head capsule of a single blown final instar larva of *T. polycommata* from Wickwar, Avon, preserved in the A. Richardson collection in the National Museums of Scotland. This strongly suggests that the host was stunted rather than having been switched to precocious prepupation an instar early (as is known to be caused by some Braconidae, cf. Shaw & Huddleston, 1991 under Cheloninae).

Discussion

It appears that *E. transversus* may be genuinely host-specific (it has not been recorded from the much more frequently reared *Trichopteryx carpinata* (Borkhausen)), and the apparent scarcity of the parasitoid is probably a combination of having a genuinely restricted host and an early adult flight period rendering casual capture of the adult relatively improbable. It should be noted, however, and duly taken into account (Shaw & Hochberg, 2001), that if *E. transversus* is indeed a host-specific parasitoid then it will inevitably be rarer and more threatened than its host, and therefore conservation effort for *T. polycommata*, which is one of the Biodiversity Action Plan Priority Moth Species (UK Biodiversity Group, 1999; Parsons et al., 2000) should be directed especially towards ensuring the survival of populations of this moth that support, and can continue to support, *Earinus transversus*. The fact that *E. transversus* is known from nowhere else in the world than Britain may, in time, be reversed but, for now, it should provide an additional – perhaps even statutory – impetus for its conservation.

Acknowledgments

I am most grateful to Roy Leverton and Gerry Haggett for combining to donate the cocoons from which the *E. transversus* emerged and for circumstantial information; to David Lampard for loaning the specimens misidentified by Morley as *E. transversus* and for additional information; and to Kees van Achterberg for checking some literature resources at his disposal.

References

- Fahringer, J., 1937. *Opuscula braconologica* 4. Palaearktische Region III: 1-420.
- Lyle, G. T., 1920-1921. Contributions to our knowledge of the British Braconidae. No 6. – Agathidae. *Entomologist* 53: 177-186, 227-230, 248-250; 54: 6-8.
- Morley, C., 1937. The Hymenoptera of Suffolk. Partio tertio et ultimo. *Transactions of the Suffolk Naturalists Society* 3: 223-248.
- Parsons, M. S., Green, D. & Waring, P., 2000. The action for threatened moths project. *Entomologist's Record and Journal of Variation* 112: 15-21.
- Shaw, M. R., 1997. Rearing Parasitic Hymenoptera. *The Amateur Entomologist* 25: 1-46. The Amateur Entomologist's Society, Orpington.
- Shaw, M. R. & Hochberg, M. E., 2001. The neglect of parasitic Hymenoptera in insect conservation strategies: The British fauna as a prime example. *Journal of Insect Conservation* 5: 253-263.
- Shaw, M. R. & Huddleston, T., 1991. Classification and biology of braconid wasps (Hymenoptera: Braconidae). *Handbooks for the Identification of British Insects* 7(11): 1-126.
- Telenga, N. A., 1955. Faune de l'URSS. Hymenoptera 5. Pt 4. Fam. Braconidae: Sumfam: Microgasterinae, Subfam. Agathinae. *Fauna Rossii (n.s.)* 61: 1-312.
- Thompson, W. R., 1944-1958. *A catalogue of the parasites and predators of insect pests* [in several parts]. Commonwealth Institute of Biological Control, Bellville and Ottawa.
- Tobias, V. I., 1986. *Keys to the insect of the European part of the USSR, Vol. 3, Hymenoptera, Part 4*. Leningrad. (In Russian. English translation 1995, Science Publishers, Lebanon, New Hampshire, USA).
- UK Biodiversity Group, 1999. Tranche 2 Action Plans. Vol IV – Invertebrates. English Nature, Peterborough.

***Cotesia cleora* (Nixon) (Hym.: Braconidae, Microgastrinae) and unidentifiable species of *Mesochorus* (Hym.: Ichneumonidae, Mesochorinae) reared from larva of *Apeira syringaria* (L.), the Lilac Beauty moth**

On 13 May 2004, Butterfly Conservation held a training day for local members at Newmarket Stud, Suffolk. The meeting concentrated mainly on the habits of the Barred Tooth-striped moth *Trichopteryx polycommata*, a UK BAP Priority Species. We included a search for the larvae by beating Wild Privet *Ligustrum vulgare* along the Devil's Dyke by the horse-training grounds. None was found, but in the process a final instar larva of the Lilac Beauty *Apeira syringaria* was obtained from the Privet, on which it fed subsequently in captivity. However, it then produced cocoons of parasitoid wasps. A total of 23 adult wasps emerged and all had died by 12 June. Interestingly they comprised two species, seven of a black one – *Cotesia cleora* (Nixon) (Braconidae: Microgastrinae) and sixteen of a fawn-coloured hyper-parasite, an unidentifiable species of *Mesochorus* (Ichneumonidae: Mesochorinae), which lays its eggs within the larvae of the *Cotesia* feeding within the Lilac Beauty larva. I am grateful to Dr Mark Shaw of the Royal Scottish Museum, Edinburgh, for the parasitoid identifications. Mark considers *C. cleora* may be specific to the Lilac Beauty. Many species of *Mesochorus* are frequent but their taxonomy is problematic.— PAUL WARING, Reader, Centre for Environment & Rural Affairs, Writtle College, Essex. Contact address: Windmill View, 1366 Lincoln Road, Werrington, Peterborough, PE4 6 LS. (E-mail: paul_waring@btinternet.com).

Scientific versus colloquial names

The article by Barry Goater (*antea* 32-33) and my comments that followed it (*antea* 33-34), concerning the relative priorities given in articles to scientific and colloquial names has generated a colossal response and the Editor's post bag has never been so full. Around 20 letters or cards and 63 e-mails have been received, indicating that this subject evidently is of greater importance to many people than I had imagined! Many opinions are expressed rather too strongly for publication and, in any event, there are too many communications for all to be used in print. Several missed the point entirely – I do not believe that it was Goater's intention that English names should be banned, just relegated to second place. Of the 83 receipts, 10 felt that English names should not be used at all, 41 felt that scientific names ought to be given priority and 32 were in favour of English names taking the fore. A very few of the more significant contributions are included below

Meanwhile, I am interested to discover that in the recent field guide to British macro moths, authored by Waring and Townsend, there is a British macro-moth species, that does not appear to have an English name. *Callopietria latreillei* (Dup.) (Noctuidae), also has no colloquial appellation in the late John Bradley's checklist nor in Harley Books' *Moths and Butterflies of Great Britain and Ireland*. Just in case anybody wants to give it one I do, inevitably, have an English name for it, summarily created during a trip to the Tam Region of France in October 2004 with Marcel Ashby, Rachel Terry and Martin Townsend, when many examples of this species were attracted to the lights: "The Baggy-trousered Moth" has priority. I will be interested indeed to see if anyone can tell me (informally) why that name is relevant to this species (and you will probably not be able to work it out from a dead, museum specimen). — EDITOR.

Further thoughts on the Continent cut off by fog

How refreshing to read the article by Barry Goater on the naming of British Lepidoptera. This subject has long undergone scrutiny and in spite of repeated criticism from learned authorities has stubbornly refused to settle down to a level of accepted common sense.

The debate has continued now for almost 250 years. William Curtis (1771), author of *Instructions for collecting and preserving insects, particularly moths and butterflies*, praised the binomial Latin nomenclature devised by Linnaeus but added wistfully that 'It were to be wished that our English names were in general equally expressive.' However, Adrian Hardy Haworth (1803), in his *Lepidoptera Britannica*, was not so sure that all the English names should be 'equally expressive' when he commented that 'Some of our English appellations, it is true, are highly fanciful, not to say absurd, and lead to no information.' He may well have been referring to James Petiver who, in 1695, clearly found difficulty in naming some species when he referred to one of the geometers as 'The Common Grey Garden-Moth with Brown Spots.' In 1937, P. B. M. Allan aimed another swipe at the English names of our moths and butterflies. 'The English [names] in use to-day are impossible, even though some of them are older than those bestowed by Linnaeus' – and after noting