

## Supplementary notes on Darwin's insects

By KENNETH G.V. SMITH

70 Hollickwood Avenue,  
London N12 OLT.

Since the publication of my account of Darwin's insects (Smith, 1987) further specimens have been located by several workers in the collections of various institutions. A few species overlooked by me are also included. These are all reported here as far as possible and assigned to the relevant Darwin numbers and entries as given in Darwin's "Insects in Spirits of Wine" (a short manuscript list in Darwin's hand in the Cambridge University Library) and his "Insect Notes" (in Syms Covington's hand in The Natural History Museum Library) in the style of my previous paper. Throughout The Natural History Museum is referred to as BM(NH).

### "INSECTS IN SPIRITS OF WINE"

376. *Pulex* from hairy underside of *Tatusia* [= *Dasypus*, armadillo Pichiy=Pichi—local name, see Darwin, 1845: 95–96] (375) curious vagabond *Ricinia*. Bahia Blanca.

SIPHONAPTERA, Malacopsyllidae: *Phthiropsylla agenoris* Rothschild. Professor R.L.C. Pilgrim (1992) found one male of this species remounted from the pin labelled "Flea on *Dasypus minutus* Bahia Blanca N. Patagonia Darwin" in W.S. Macleay's handwriting in the Macleay Museum,<sup>1</sup> University of Sydney. The original label was attached to the slide by Ricardo Palma, National Museum of New Zealand. The species is typically found on armadillos in the Neotropical Region (Smith, 1987: 20; Smith, 1987: 43).

### "INSECT NOTES"

325. Numerous single Coleoptera. Hemiptera from Bahia Brazil.

COLEOPTERA, Eumolpidae: *Bromiodes squamosus* Bryant (1923: 262). The original description includes a *single* Darwin specimen; thus I refer this here rather than to other Bahia entries (348, 349, 3858–3864). I have examined this specimen in the BM(NH) and it is labelled '3' written in ink upon a white label and has a printed label 'Darwin Coll 1885–119'. This is not a Darwin label. On the original MS of the "Insect Notes" there is a note by G.R. Waterhouse, "Many specimens from this collection were presented by C.O. Waterhouse Reg. No. 85. 119. Some of them bear Nos 1–4, as per label:–1, Sydney 3528; 2, Van Diemen's Land; 3, Bahia; 4, King George's Sound Australia".

Bryant notes that this beetle attacks coconut palms, a tree which Darwin mentions as one of those forming part of the "thousand beauties" of the scenery of Bahia in his *Journal of Researches* (1845: 497).

618. Coleoptera Do. [Rio de Janeiro].

COLEOPTERA, Corylophidae: *Corylophodes glabratus* Matthews (1887: 109) "Found near Rio de Janeiro". One specimen in BM(NH) labelled "Rio" with "618" on verso. Matthews was apparently unaware that this was a Darwin specimen (and those under 1322 and 3524 below).

1321. 1322. 1323. Coleoptera [Maldonado].

COLEOPTERA, Corylophidae: *Sacium alutaceum* Matthews (1887: 106). "Found near Maldonado, in South America." One specimen in BM(NH) labelled "Maldonado" with "1322" on the verso.

3524. 3525. 3526. Insects by sweeping Do. [Hobart Town].

COLEOPTERA, Corylophidae: *Sericoderus australis* Matthews (1887: 108). Found near Hobart Town in Tasmania. One specimen in BM(NH) labelled "Hobart Town" with "3524" on the verso. This species was later synonymized by Matthews (1899: 121)<sup>2</sup> with *S. fulvicollis* Reitter.

Oedomeridae: *Ischomena sublineata* Waterhouse, (C.O.). One specimen in the BM(NH) collection labelled "Tasmania, Hobart, C. Darwin". The species was described by C.O. Waterhouse (1877, *Cistula Entomologica* 2: 229 [*Sessinia*]) but no Darwin material was cited in that paper.

3528. Insects sweeping near Sydney, S. Covington.

COLEOPTERA, Coccinellidae: *Scymnus cardinalis* Mulsant "1887-42". "3528". This specimen was in the Fiji Sugar Corporation's Collection which was incorporated into the collections of the University of the South Pacific, Fiji. How the specimen came to be there is not known, but it was presumably acquired by exchange. The BM(NH) Accession Number 1887-42 is for "2000 Coleoptera from various localities presented by G.R. Waterhouse Esq. Collected by Charles Darwin in the voyage of the *Beagle*." Professor R.A. Beaver has very kindly presented the specimen to the BM(NH). Two other *Scymnus* species (and many other insects) were included for this entry in my previous account (Smith, 1987).

THYSANOPTERA; Phlaeothripidae: *Idolothrips spectrum* Haliday in Walker (1852) New Holland. No captor given but according to Bagnall (1908: 207) this was a Darwin specimen, and he erected the new genus *Acanthinothrips* to receive it.

According to Mound and Palmer (1983) the type depository of this species is unknown. Although the specimens were sent to Haliday for description they have not been found in the Haliday Collection in the National Museum of Ireland (Dr J.P. O'Connor, pers. comm.). Incidentally, the puzzle of the word 'Fitans' relating to Darwin thrips sent to Haliday by Walker (Smith, 1987: 30) is explained by the late Dr M.W.R. de V. Graham (an expert on Walker) who kindly informed me (pers. comm.) that the word is really 'Titans' (Walker was stressing their unusually large size). The largest species are usually tropical (size range of thrips 0.5–ca 15.0 mm, *I. spectrum* being the latter). Thus, my quote should read "... Thrips (of which there are some Titans half an inch long)".

This entry is interesting in that Darwin's assistant and amanuensis, Syms Covington (the "Insect Notes" are in his hand, see Smith, 1987: 113, note 6), is actually mentioned by name. A revised and enlarged edition of the short biography of Covington (cited in Smith, 1987) is provided by Ferguson (1988).

3561. Small insects sweeping on coarse grass or brushwood. King George's Sound. March [1836].

HEMIPTERA, Delphacidae: *Pseudembolophora macleayi* Muir (1920: 181). Muir (1934: 575) says "Four specimens somewhat damaged . . . These specimens were taken by Charles Darwin at King George's Sound, South West Australia (1836). The genus and species were described by Muir (1920) from three specimens in the Macleay Collection, Sydney also taken at King George's Sound."

3688. 3689. 3690. 3691. Small insects sweeping in Valleys of mountains near Simons Bay. [Cape] June.

DIPTERA, Empididae: ?*Syneches* sp. Two specimens, each labelled "Cape of Good Hope. C. Darwin" (printed), "Darwin Coll. 1885–119" (printed), "3690" (handwritten) in BM(NH). These specimens differ from all species of *Syneches* included in my monograph of African Empididae (Smith, 1969b) and may prove to be not congeneric. They will be described elsewhere by Dr Bradley Sinclair who kindly drew my attention to them in the Diptera Accessions drawers in the BM(NH).

The following recently located Darwin specimens cannot be assigned to specific numbers or entries.

COLEOPTERA, Anthicidae: *Notoxus* sp. in the Lyman Entomological Museum. Labelled: "Voyage/of the/Beagle" (handwritten in blackish ink on bluish-green paper); "Ex-Musaeo/Parry" (printed in black and surrounded by a black rectangle on a pale buff label); "Muséum Paris" (printed)/"Col La Ferté" (handwritten in blackish ink on very pale blue nineteenth century Paris Museum label); "Collection of the/Lyman Entomological Museum/and Research Laboratory/Ste-Anne-de-Bellevue/Quebec, Canada" (printed in black on white label).

The genus *Notoxus* is widespread geographically, so a precise locality or entry cannot be deduced.

The late Professor D.K. McE. Kevan kindly sent this specimen (found by Francois Genier) for examination, but had no idea how it came to be at the Lyman Museum.<sup>3</sup>

The Parry referred to was certainly Frederick John Sidney Parry (1810–1885), a coleopterist whose collection and library were auctioned by Stevens on 16 May 1885 (Allingham, 1924; Chalmers-Hunt, 1976). According to McLachlan (1885) “At one time he [Parry] had a general collection of Coleoptera but latterly it was limited to Lucanidae and Cetoniidae”. This suggests that his general collection of beetles, including Anthicidae, could have been privately dispersed *before* his death. This may explain how the Anthicidae could have come earlier to La Ferté [Marquis F. Thibault de la Carte de La Ferté-Senectère (1808–1886)] who had published a monograph on the family in 1848. La Ferté’s collections mostly went to Paris (Muséum national d’Histoire naturelle) on his death, though the [identified?] Anthicidae supposedly went to Eugene Louis Bouvier (1856–1944). One can only assume that the Darwin specimen, unrecognized as such (and probably unidentified even to family) came to be in Canada by an exchange of material with the Paris Museum.

Two Parry specimens of *Hypaulax ampliata* Bates (F.) (Tenebrionidae), bearing typical “Voyage of the Beagle” blue labels and like the above without data, were reported on in my previous account (Smith, 1987: 100) (and tentatively referred to King George’s Sound), but these came to the BM(NH) via Frederick Bates (B.M. Accession No. 1881–19) (brother of Henry Walter Bates).

## EPONYMS

A further insect generic Darwin eponym has come to light.

*Darwiniphora* Schmitz, 1953, Phoridae (part). *Die Fliegen der palaearktischen Region* (Lieferung 171) (1952) 4, (33): 280. (Diptera, Phoridae). Erected for *Conicera duplicata* Schmitz 1929. Chile. Not based on Darwin material.

Similarly one more Darwin insect eponym in a specific name has been found.

*Polybothris darwini* Théry, A., 1912, *Annales de la Société Entomologique de Belgique* 56: 114. (Coleoptera, Buprestidae). Madagascar. Not based on Darwin material.

## NEW LITERATURE

Finally, two items of new literature give interpolations of some of Darwin’s insect specimens described in other works.

A magnificent work by Bouček (1988) includes an assessment and reclassification of the Hymenoptera Chalcidoidea described by Francis Walker (1839) including Darwin material collected in Australia (Sydney, King George’s Sound and Tasmania (Hobart)) (“Insect Notes”, entries 3524–3528 and 3561). The works of the eccentric systematist Girault who coined several Darwin eponyms (Smith, 1987: 110–111) are

also included in Bouček's treatment (though Girault did not describe from Darwin's material).

Graham (1987) provides precise dates for some of the Haliday plates intended to illustrate Volume 2 of Walker's *Monographia Chalciditum* (1839) but published in the *Entomologist* (see below). Unfortunately, the only plate (P) depicting Darwin specimens was not among those specifically treated by Graham, but it can be inferred from his comments to have appeared in issue number 21 of the very rare Volume 1 of *The Entomologist* (1840–1842), probably in August 1842. Some of these figures had incidentally also been used to adorn the covers of *A Bibliography of Irish Entomology* (Ryan *et al.*, 1984) as a tribute to A.H. Haliday, Ireland's greatest entomologist. Of these, the two specimens in side view on the lower half of the cover depict Darwin specimens: *Thoracantha furcata* Walker (upper) and *Eucharis iello* Walker (lower) (compare with fig. 16, Smith, 1987).

Another recent work (Nicholas and Nicholas, 1989) reproduces some of the historic insect illustrations used in my account (Smith, 1987) with further information on Darwin's collecting during the 62 days he spent in Australia.

As appropriate collections of Darwin's entomological contemporaries are studied in the future (e.g. the Rippon Collection, *vide* Kirk Spriggs, 1995) further items collected on the *Beagle* voyage may well come to light; these are most likely to be among unidentified material.

## NOTES

<sup>1</sup> The Macleay Museum, University of Sydney, contains some 500,000 specimens (Hornung, 1984) mostly collected from 1756 to the mid-1800s. The collection was virtually inaccessible from 1912–1982 but the recent appointment of a curator has made the collection available for study. The Museum was founded by Alexander Macleay (1767–1848), an amateur entomologist who, apart from his own collecting, traded with most of the important entomologists of his day and purchased at auctions. Alexander's eldest son, William S. Macleay (1792–1865) worked for the British Government in Paris where his acquaintances included Cuvier and Latreille. In 1839 he joined his father in Sydney, inherited his collection and built upon it. He was a friend of Lt J.B. Emery of H.M.S. *Beagle* (third surveying voyage, 1837–43, in command of Captain Lort Stokes) in 1839, also in 1849 T.H. Huxley, assistant-surgeon of H.M.S. *Rattlesnake* (Fletcher, 1921–1929: 614–5). An excellent account of the third *Beagle* voyage, including collecting in Australia (without Darwin of course) is provided by Horden (1989).

<sup>2</sup> Of further interest to entomological historians is a note in the editor's preface to Matthew 1899 "the figures having been transferred to zinc by Mr J. Collin of Newmarket and I have to thank him for the trouble he has taken to make them accurate copies". The Plate A is labelled "J.E. Collin transf" and plates I–VIII are labelled "A. Matthews ad. nat. del. J.E. Collin transf." and all marked West, Newman [*sic*] imp'. J.E. Collin was a famous dipterist (obituary Smith, 1969a; bibliography Smith, Cogan and Pont, 1969) who as a young man illustrated books and papers on Diptera written by his equally eminent dipterist uncle G.H. Verrall. Apparently this aspect of Collin's work was more widely called upon than previously appreciated. An important item omitted from the Collin bibliography and of some interest to historians of evolution is "Note. *Drosophila* sub obscura sp. n. ♂ ♀, *Journal of Genetics* 33(1): 60". This 1936 item appears at the end of a paper by C. Gordon on *D. melanogaster* and *D. subobscura* and was overlooked. The species described became one of the mostly widely used in genetic speciation studies!

<sup>3</sup> The Lyman Entomological Museum contains the largest University insect collection in Canada, only exceeded in size by the National Collection at Ottawa. It was founded in 1914 when Mr H.H. Lyman, a distinguished amateur lepidopterist (with interests in Diptera and Hymenoptera) bequeathed his entomological collections and library to McGill University, with financial provision for its maintenance and expan-

sion. Exchanges with other institutions and individuals throughout the world have been a long-established policy (Vickery and Moore, 1964).

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