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The species of *Acanthagyna* here described as new is not uncommon in the neighbourhood of Vom, North Nigeria (on a Plateau, height 4,000 feet). The description is based on the following material: two mature males taken on the wing and settling on overhanging bushes by a small stream half an hour before sunset on April 15th, 1949; two rather immature males taken on the wing under the shade of trees in a small plantation an hour before sunset on October 25th, 1950; a female in a similar state of development the following evening in the same place; and a mature female which flew into a house on April 3rd, 1953. Others, probably of the same species, have been seen on the wing from time to time, during the months of September to November. One of the original males has been selected as the type, and the mature female of 1953 as the allotype. These will be deposited in the British Museum (Natural History).

I have placed the new species in the genus *Acanthagyna* Kirby, 1890, rather than *Gynacantha* Rambur, 1842, although the latter name is still used by most authors for its closest relatives. Cowley (1934) has summarised the various omissions and misunderstandings that led Kirby to fix *trifida* Ramb. as the type of *Gynacantha* and propose a new genus for the species remaining after the *trifida* group had been split off. All the African species at present referred to by authors as *Gynacantha* should strictly speaking be placed in *Acanthagyna*.

Acanthagyna nigeriensis sp.nov.

Male (type).—Head: labium and labrum yellowish-brown; clypeus and anterior surface of frons greenish-brown; dorsal surface of frons greyish behind and brown in front, the brown becoming dark along the frontal ridge and forming the cross-piece of a faint and ill-defined T-shaped mark; the stem of the T is very faint and fades away posteriorly; vertex dark blackish-brown; antennae reddish brown.

Thorax: pterothorax olive-brown, with ante-alar sinus, tergites, and wing-bases dark green; metastigma inconspicuous yellowish-brown; legs uniform yellowish-brown.

Abdomen: segments 1-2 dilated both transversely and dorso-ventrally, brown, patterned with dark green; oreillets moderate in size, somewhat rounded posteriorly but with the outer margin more or less straight, with a series of denticles (nine on the left, eight on the right) commencing on the outer margin and carried round posteriorly, but only the last five or six are at all prominent; maximum width of 1st segment 4.4 mm., depth dorso-ventrally 4.1 mm.; 3rd segment brown, constricted transversely in the middle, minimum width 1.35 mm.; segments 4-10 brown, almost cylindrical in appearance, 2.2 mm.; wide, but expanding slightly to 2.7 mm. at the end of segment 9, and becoming 2.5 mm. at the end of segment 10; depth 2.2 mm. throughout.

Anal appendages light brown, the superiors 5.7 mm. long and expanding to the maximum width of 0.7 mm. after the proximal third (just before the tip of the inferior appendage) and the remaining of constant width until the beginning of the distal quarter, where they start to become narrower and soon taper off to a point; the inner margin is fringed with long hairs, as in the other species of the genus; inferior appendage 2.1 mm. long, wide basally and tapering to a blunt rounded point (fig. 1).

Accessory genitalia: a single row of 13 small black knob-like spines along the margin of the genital fossa on the ventral surface of abdominal segment 2; the two rows diverging anteriorly, extending well beyond the base of the oreillets, and converging posteriorly (on the left, the most anterior spine is replaced by two small ones) (fig. 5).

Wings hyaline, costa brown, remaining veins blackish; pterostigma brown, 3.4 mm. long in the fore-wing and 3.25 mm. in the hind; nodal formula $\frac{17|25}{17|16}| \frac{23|16}{16|20}$; Bsq present;

cells in the radial fork becoming three rows after four cells (after six in the left hind-wing); four to five rows of cells between IR_3 and R_{5+6} ; cells between R_{4+5} and MA starting with one row and ending with two; four rows of cells between MA and M_{3+4} where they are widest apart (except in right hindwing, where there are five); anal loop of ten cells, separated from the posterior margin by one row; anal field with two rows of cells.

Length of abdomen (including appendages), 50 mm.; length of hindwing 45 mm. breadth 13.5 mm.

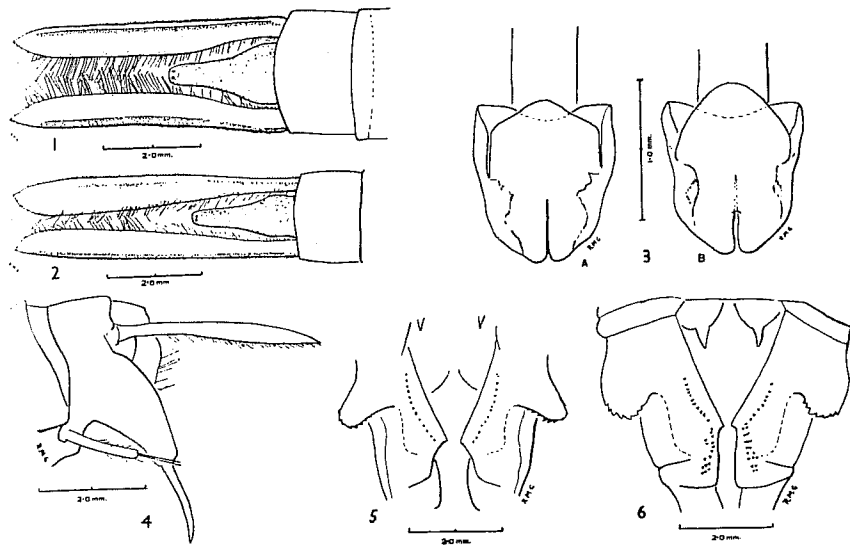
Female (allotype).—Generally similar to the male in size and coloration, but without

male (3.8 mm.); the pair of ventral spines on the genital plate on the 10th segment almost straight (left-hand spine is shown in fig. 4); styles 1.5 mm.

Wings: nodal formula $\frac{20|26\frac{1}{2}}{20|20}| \frac{27|18}{19|20}$; cells in radial fork becoming two rows after two cells in left fore and right hind wings, after three in right fore, and after $2\frac{1}{2}$ in left hind; five rows of cells between IR_3 and R_{5+6} in all wings; cells between R_{4+5} and MA commencing with one row and ending with two in all wings; four rows between M and M_{3+4} in both fore-wings, and five in both hind; twelve cells in anal loop in left hind-wing, and thirteen in the right; four rows between anal loop and anal margin.

Length of abdomen (including appendages), 50 mm.; length of hind-wing 47 mm.

The October specimens, both male and female, were in general very similar to the more mature ones described above, but the green markings on the dorsum of the thorax and first two abdominal segments were only very faintly indicated.



FIGS. 1-2.—Anal appendages of ♂ (dorsal view): 1, *Acanthagyna nigeriensis* sp.n. (type); 2, *A. bullata* (Karsh). FIG. 3.—Tip of penis (from the dorsum): A, *A. nigeriensis* (paratype, 15.iv.1949); B, *A. bullata*. FIG. 4.—Tip of ♀ abdomen (left lateral view): 1, *nigeriensis* (allotype). FIGS. 5-6.—Genital fossa (ventral surface of 2nd abdominal segment of ♂): 5, *A. nigeriensis* (type); 6, *A. manderica* (Grünb.).

The new species is very similar to *A. bullata* (Karsch), but not quite so slender, and distinguished by the absence of the latter's black femoro-tibial articulations and by the shape of the superior anal appendages which are of uniform width for the greater part of their length instead of reaching their widest only after the proximal two-thirds, as in *A. bullata*, *A. usumbarica* (Sjöstedt), and *A. stylata* (Martin); (figs. 1-2). Another point of difference from *bullata* is the structure of the penis. The tongue-like backward projection on the true ventral surface (actually dorsal in position and pointing forwards owing to the tip of the organ being bent over, and so concealed and only visible when the tip is removed and turned over) is shorter and blunter than in *bullata*; (fig. 3). The oreillets of the male are less rounded than in either *bullata* or *A. manderica* (Grünberg). The pair of spines on the genital plate of the female 10th segment are rather less curved than in *bullata*, and much less than in *manderica*.

The superior appendages of the male are similar to those of *manderica* which also occurs in Vom, but are more tapered at the tip. In *manderica* the tips are more spine-like and the ends are turned slightly outwards. These two species can also be distinguished by the small spines along the

ment. In *nigeriensis* they extend further forward, to a point considerably anterior to the hind border of the oriellets (fig. 5). In *manderica*, in addition to not extending so far forwards they extend further backwards, diverging again behind the point where they approach most closely and becoming a double row after the point of divergence (fig. 6). In addition, *nigeriensis* has not such broad wings as *manderica*, and more cells between IR₃ and Rspl (four to five rows instead of about three). The cells in the radial fork become three rows after about four cells, instead of after one or two as in *manderica*. The female differs from that of *bullata* and *manderica* by the absence of any appreciable constriction of the 3rd abdominal segment.

It is a much smaller species than *A. sextans* (McLachlan) and *A. quadrina* (McLachlan) (= *vesiculata* Karsch).

A. villosa (Grünberg), another species which occurs in Vom, is readily distinguished by the excavated inner margin of the superior anal appendage of the male, and in both sexes by its more robust appearance, the conspicuous black metastigma, and the pale yellowish dorsal surface of the frons with the stem of the T-shaped mark very sharply defined, black, and dilated posteriorly. The female of *villosa* has longer superior appendages (5.5 mm.), but the styles are shorter (1 mm.).

The nymphal stage of *A. nigeriensis* has not yet been discovered, but the fact that immature specimens were taken in October and more mature ones in April suggests that the biology of the species may be similar to that of *manderica* and *villosa*, both of which have been found breeding in Vom in small temporary water-holes during the rainy season, filling up about July and drying out completely by September or October.

I should like to express my gratitude to Miss Cynthia Longfield, F.R.E.S., who has kindly confirmed that my species is distinct from any in the British Museum (Nat. Hist.) and from any that she has seen described in the literature, and has also given advice on the terminology used in the description and much general encouragement to my studies in the Odonata.

REFERENCE

Cowley, J., 1934. Changes in the generic names of the Odonata. *Entomologist*, 67: 200-205.

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Schizotus pectinicornis L. (Col., Pyrochroidae) and other beetles in Breconshire.—Little collecting appears to have been done in this county (cf. Airy Shaw, 1946, *Ent. mon. Mag.*, 82: 275), so I record the following mostly very local species taken by my friend Mr. R. S. Ferry at Llangammarch Wells in the second week of June, 1947. The most interesting was the rare cardinal-beetle *Schizotus pectinicornis* L., which was not uncommon in comparison with its near relative *Pyrochroua coccinea* L. on hazels, etc. (I am indebted to Mr. Ferry for an example, and to Mr. P. Harwood for others from the Highlands of Scotland, its British headquarters.) I have not seen an actual published record of the species for Wales, but the sole English capture that appears to have been noted so far was close to the Welsh border, viz., in the Herefordshire portion of the Black Mountains (Chapman, l.vi.1802, in Tomlin, 1950, *Herefordshire Coleoptera* (2): 52, the entry is 'Cusop, very rare' without a reference to Chapman; this may, therefore, relate to a subsequent find). However, Mr. G. H. Ashe took his series in Wales, and within the last decade found pupae at Neth Bridge, Speyside. There seems, accordingly, no good reason now to think that *S. pectinicornis* is almost extinct in our islands as Mr. E. A. J. Duffy suggested in 1946, *Ent. mon. Mag.*, 82: 92. Perhaps these two widely separated centres—mid-western and northern—will eventually be linked by the discovery of intervening localities, e.g. in the hill country of northern England; it might also exist in the Irish mountains, like several other Caledonian and Cambrian insects.

The other species referred to above are the 'beo-chaffer', *Trichius fasciatus* L., of which one was taken from a foxglove (the British distribution of this beetle is comparable to that of *Schizotus*; I have met with it near Monmouth); the Carabid *Calosoma inquisitor* L., one found on a fern; a number of *Dascillus cervinus* L.; and a single *Geobius*

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Kutter (1950) described a new genus and species of workerless ant parasite *Teleutomymex schneideri* which he discovered with its host species *Tetramorium caespitum* L. in the neighbourhood of Saas-Fee in the Swiss Alps in 1949. This species exhibits an extreme form of parasitism. The tibial cleaning apparatus and mouth parts are much reduced, the parasite being entirely cleaned and fed by workers of the host species. Although both sexes have wings, these are apparently not normally used; fertilisation occurs within the nest and the females attach themselves to the female of the host species. They may thus be carried throughout the nuptial flight and presumably the subsequent colony founding of the latter. The parasitic female is peculiarly adapted to clinging to the body of its host by having a ventrally concave or saucer shaped abdomen which is usually closely adpressed to that of the female *Tetramorium*.

The behaviour and structure of *Teleutomymex schneideri* have been described by Kutter (*loc. cit.*) following his original discovery and a detailed anatomical study has been made by Gösswald (1953). The ant has affinities with *Strongylognathus* and *Tetramorium* rather than with *Anergates* to which it bears a superficial resemblance, and has been assigned by Kutter to the Tetramoriini (new sub-tribe Teleutomyrmini).

On June 2nd, 1955, the writer had the good fortune to discover two degenerated female *T. schneideri* in a small *Tetramorium caespitum* colony near Briançon in the S. French Alps. The tiny females whose abdomens resembled droplets of amber were tightly attached to the abdomen of the *T. caespitum* queen. The two parasites were secured in spirit and the host queen together with a few workers and brood were brought back alive. Unfortunately the queen which was very sluggish soon died together with several workers and no further parasites were reared. The circumstances of the capture were similar to those described by Kutter for Saas-Fee. The *T. caespitum* colony was under a flat stone along a ride in an open larch wood at about 6,000 ft. on the S.E. slope of a mountain to the N.W. of Briançon. No other mixed colonies of *T. caespitum* were found in the area. This record is new for France as the species has hitherto only been found at Saas-Fee in Switzerland.

I am indebted to Mr. M. Bibikoff who was able to identify the ant by comparison with a female from Dr. Kutter in his possession.

REFERENCES

Kutter, H., 1950, Über eine neue, extrem parasitische Ameise, Mitteilung, *Mitt. Schweiz. ent. Ges.*, 23: 81-94. Gösswald, K., 1953, Histologische Untersuchungen an arbeitlosen Ameise *Teleutomymex schneideri* Kutter (Hym., Formicidae), *Mitt. Schweiz. ent. Ges.*, 26: 81-128.

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October 15th, 1955.

In *Orange-tip* (*Euchloë cardamines* L.) (*Lep.*, *Pieridae*) active indoors in January.—*The Daily Telegraph* of February 2nd, 1956, G. H. Marillier recorded a freshly emerged *Orange-tip* fluttering about in a warm room a few days previously. The place was London, N.W.3, and the date was January 22nd. The correspondent, who rightly stated that the adult *Orange-tip* does not normally hibernate, supposed that a larva had wandered in the ordinary food-plant, Cuckoo Flower (*Cardamine pratensis* L.), and pupated on it. *Lunaria biennis* Moench., some dried stems of which stood in vases in the room. But if the larva had pupated on Honesty (as it may well have done), it may also be found on that Cruciferous plant, for various Cruciferae, cultivated as well as wild, are food-plants for the *Orange-tip* (notably, it may be added, the garden Sweet Lett, *Hesperis matronalis* L., on which I found a number of *Orange-tip* larvae in 1945: *Ent. mon. Mag.*, 81: 276-7).—HUGH SCOTT, Ancastle Cottage, Gravel Hill, Henley-on-Thames, February 14th, 1956.