On some Trichoptera collected by Mrs. Drs. A. C. Ellis and Dr. W. N. Ellis on Gomera (Canary Islands)

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ABSTRACT. — Y caddis-fly spccics wcrc caught on Gomera, either as imagines or as young insiars. Mosi *of* ihcni are iicw for this island or for ilic Canary Islands as a wliolc, and the genus *Orthotrichia* is even iicw to ihc fauna of the Macaronesian islands. A new species of *Stactobia* is described.

Thc irichopicran fauna of tlic Canary Islands could be considered ns being moderately well known, ihc caddis-flies having bccn collected on these islands since more than a cciiiury by several distinguished entomologists, and having hccii ilic object of several publications, including those of Nybom (1948, 1954). But the small isliiiid *of* Gomera — in fact little propitious to the development *of* a rich fauna *of* aquatic insects — has produced so far, to ilic best of my knowlcdgc, only *Stactobia storai*. Nyboni aiid *Mesophylax aspersus* Rambur. During a collecting trip ihcy madc in January 1981 to ihis island, Mrs. Drs. A. C. Ellis (Hugo de Vrics Laboraiorium, Amsterdam) and Dr. W. N. Ellis (Institute of Taxonomic Zoology, Amsterdam) wcrc kind enough to sample for me some imagines and young insiars *of* Trichoptera in a fcw localities; ihis cnablcs me to bring soinc additions io ihc fauna *of* Gomera and of ilic Canary islands, and to dcxribc a iicw spccics *of Stactobia*. I take the opportunity to express niy gratitude to ihc above mentioned colleagues. Tlic wholc material is prcscrvcd in ilic Institute of Taxonomic Zoology (Zoölogisch Muscum).

Agapetus adejensis Enderlein. — In a brook at El Cedro (600-700 in alt.) many larvac. 3 pracpupac, as wcll as one ♂ pupa wiili perfectly developed genitalia, wcrc sampled. The examination of ihc genitalia shows beyond doubt that this is ilic species already known froiii Gran Canaria, Teneriffe, and La Palma (good drawings: Nybom, 1948). The larval cases of A. *adejensis* are in all rcspccis typical for ihc genus.

Oxyethira fischeri Higler. — A good number of larvae, praepupae and pupae of an *Oxyethira* wcrc caught on stalks of rotting *Arundo donax* L. and stones iii a sunny rock pool iii a small brook at Chejelipes; 2 ♂ pupae wcrc "old" enough to enable me to examine the genitalia, and I madc surc that ihcy belong to *Oxyethira fischeri* I liglcr, described from Madeira (I liglcr. 1974) aiid hiihcrio unknown from the Canary Islands. I take ilic opportunity to give soinc drawings hcrc (fig. 1-6). Anioiig the most distinctive characters of this species closely related to O. *falcata* Morton (see for comparison: Kimmins 1958) I consider ilic apex of ilic phallus wiili its asymmetrical lobes crowned with minute spines and wiili its strange slender mobile appendage, as wcll as ihc distinctly tribranched median lobe of ilic IXth sternite. One more praepupae of *Oxyethira* (species?) was taken at La Carbonera (550-600 m alt.)

Orthotrichia sp. — Much to iiiy surprise I found in ihc above mentioned sample from Chejelipes 3 larvac and 3 empty larval or pupal cases, undoubtedly belonging to an (unfortunately noi dcicrminnblc) spccics of *Orthotrichia*. This gciius was hitherto unknown from the Macaroncsian Islands. Subsequent research will show if it is *O. angustella* Mac Lachlan, known also froni ihc Iberic Peninsula aiid from N. Africa, or a distinct spccics.

Stactobia storai Nybom. — 3 ♂ wcrc caughi ilic 27 January on plants hanging above a madicolous habitat, in the Bosque de El Cedro, at 700-800 m alt. It was not vcry easy to make sure that ihcy belong indeed to ihis spccics, comparison wiili ilic available descriptions and drawings (Nyboiii, 1948; Schmid 1959) being not quite cnsy a task. But I have now no doubts about the determination of ihis spccics. which wiis already liiiowii from a nearby locality on Gomcra ("Cumbre, Agua Silva"). Some additional remarks on ilic ♂ genitalia could perhaps

he useful. Anterior extensions of ilic IXth segment slender and vcry long; vicwcd ventrally, the "superior appendages" are larger than figured, they join laterally ihc superior hraiich *oí* ilic gonopods; when completely spread under a cover-slide, the superior hranch *oí* ihc inícrior appendages has the shape of a quasi-rectangular plate, and tlic apex *oí* the inferior branch shows under certain angles a marked hook wliich is absent undcr some other angles; the two phallic spines are stouter than figured. Length of the anterior wing oí ilic 3 spcciniciis: 2mm, 2.3 mm, and 2.7 mm (ilic wings are only dark brown in ilic two smaller spcciniciis, hui black in the third onc).

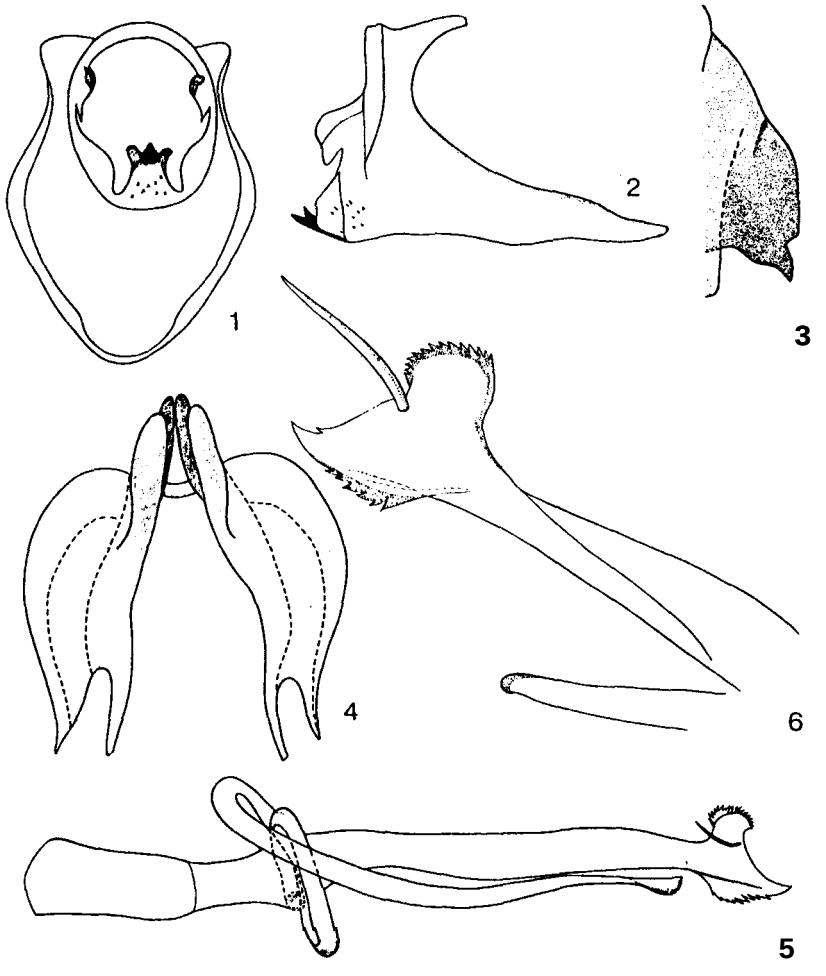

fig. 1-6. *Oxyethira fischeri* Higler, ♂ genitalia. 1-2. IXth segment in apical and lateral view. 3. apical part of the iiiícrior appendages, lateral vicw. without annex processes. 4. ilic iiiícrior appendages in ventral vicw. 5-6. phallic complex, and its apical parts more enlarged.

Stactobia gomerina n. sp. (fig. 7-9)

Onc spcciincn (♂ holoiypc: preserved in glycerin, abdomen cleared in Na OH) was caught together wiili ilic above mentioned *S. storai* and wiili a ♂ of *Tinodes canariensis* Mac Lachlan, on planis hanging above a madicolous habitat in ilic Bosque de El Cedro, at 700-800 ni alt. (27 January 1981). Length oí the anterior wing: 2.8 mm. The wings are black, without silvery point. VIIIth tergite wiili distinctly backward prominent latero-ventral angles (fig. 7); VIIIth sternite (fig. 8) wiih anterior margin distinctly and regularly excised on either side, wiili an obtuse extension between ilic excisions; posterior margin wiili a shallow but broad excision (not triangular). Process *oí* the VIIth sternite with funnel-shaped apex. IXth segment: ihc anicrior cxicnsions are extremely short; iii lateral vicw the scgiiicni is proximally vcry high, wiih cdgcs regularly converging towards a raihcr pointed apex. Xih segment wiili sclerites which are sinuous and vcry hairy (fig. 7). The large and strongly sclerotized "superior appendages" coalescent at ihcir base with ihc dorsal cdgc *oí* the IXth scgnicni; ihcy describe a semi-ellipse, ihcir dorsal cdgcs are strongly reinforced, their tips projcci downward (fig. 7): in fig. 8 these tips are seen as noi vcry prominent teeth, separated from ilic apical part oí the appendages projecting íorcward and somehow outward — through indentations. Inferior appendages composed of two vcry differently shaped branches; although distinct, these branches are not widely distant in lateral vicw, and they are also coalescent in their basal parts (this is especially distinct in ventral vicw-fig. 8 — whcrc the superior and ilic inícrior branch form ilic two strong and widcly distant points oí ilic black pitchfork representing ilic inícrior appendages). The superior

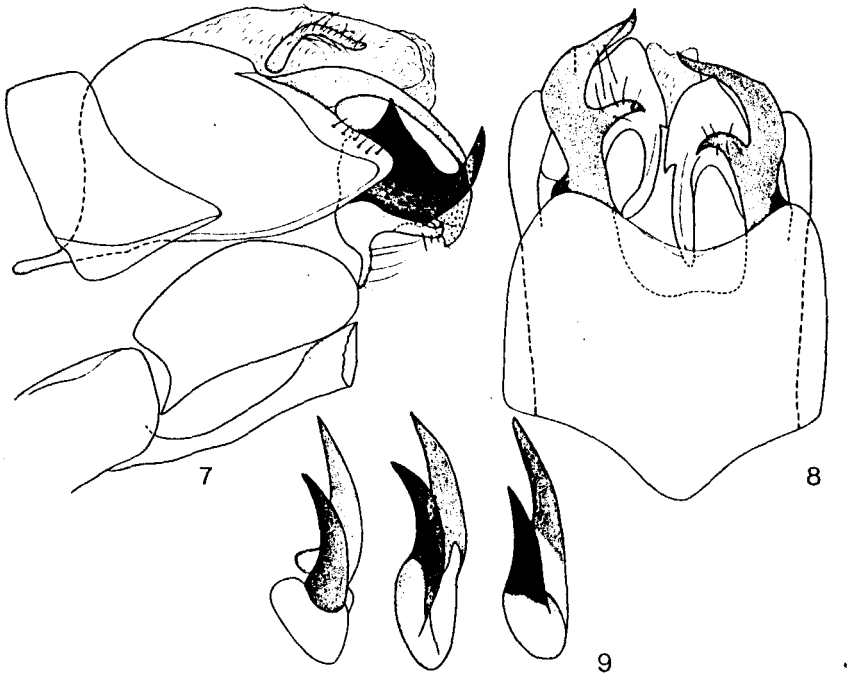

Fig. 7-9. *Stactobia gomerina* n. sp., ♂ genitalia. 7. lateral vicw. 8. ventral vicw. 9. ilic internal spines oí the phallic complex, in three slightly different views.

branch of the inferior appendage (completely black in fig. 7) has its long apical part strongly pointed like a horn directed upward and medially, its tip *not* forked, and there is also a strong triangular "tooth" at the proximo-dorsal part (almost not visible ventrally!) — the whole looking like the head of an African rhinoceros. The inferior branch of the inferior appendages is, in lateral view, a narrow appendage with apex pointing upward. The "root" of the inferior appendages is distinctly vertical (fig. 7). In order to avoid damaging the unique specimen, I refrained from too long submitting the abdomen to the action of Na OH; as a result, the shape of the phallus cannot be described, but it was perfectly possible to obtain a correct idea of its internal spines (fig. 9): these are only two, moderately long and almost of the same length, rather stout but pointed, only slightly curved (none of them is curled); they arose from contiguous bases and are almost parallel.

Stactobia gomerina n. sp. is clearly related to two other Canarian species, *S. storai* Nybom and *S. freyi* Nybom (Nybom 1948, Schmid 1959), and it is certainly the sister-species of the last one. The most important destinctive characters of the new species are: the lateral shape of the IXth segment; the very peculiar aspect of the inferior appendages which, though somehow resembling those of *freyi*, have quite different relations between their two branches (forming, in ventral view, a strong pitchfork), longer apical "horns" of the superior branch whose tips are not bifurcate in ventral view, and vertical "roots"; finally, the internal spines of the phallic complex, which are subequal, no one of them being curled.

Wormaldia sp. (possibly *tagananana* Enderlein, the single *Wormaldia* known from the Canary Islands: Teneriffe). — 1 ♀ pupa was found in a brook at Ermita N.S. de Lourdes, El Cedro, 600-700 m alt. This is a very large *Wormaldia* — the pupa measures 1 cm.

Tinodes canariensis Mac Lachlan. — The single ♂ caught (27 January) near a madicolous habitat in the Bosque El Cedro, 700-800 m alt., corresponds well to the good description and drawings in Nybom (1948). This is also an addition to the fauna of Gomera.

Segm.	D.	L.	V.
II	0 - 1	-	1 - 2
	3	1 - 2	3
III	2 - 3	1 - 2	2
	2 - 3	1 - 2	3
IV	1 - 2	-	2
	1 - 2	-	1 - 2
V	1	-	1
	0 - 1	-	1 - 2
VI	0 - 1	-	1
	-	-	1 - 2

Table 1. Distribution of the gills of the last instar larva of *Mesophylax asp* [illegible] from Gomera

Hydropsyche sp. — 2 larval and 2 (young) pupae were caught together with *Wormaldia* sp. (vide!).

Mesophylax aspersus Rambur. — A good number of larvae were sampled in a brook at Ermita N.S. de Lourdes (El Cedro, 600-700 m alt.). One young larva and one empty case were sampled at two other localities. Adults of this species were already sampled on Gomera (Nybom 1954) and the larval morphology unmistakably shows that we are concerned with this species (*Mesophylax aspersus* is certainly a good species, and the presence on some abdominal segments of the larva of bunches of 2-4 gills, instead of the single gills of all other Stenophylacini, is one of its distinctive characters). The larvae from Gomera show some peculiarities; it would have been advisable to compare them with larvae from S. France (the type locality of the species being Montpellier) and, as a matter of fact, a description of the larva from S. France was published (Jacquemart 1962), but it is, unfortunately, of little help for a comparison. I shall therefore compare with the larvae from some wadis in the Sinai Peninsula — at the opposite end of the species distribution area (Botosaneanu 1974). I shall here give emphasis only to the observed differences. The larvae presumably in the last instar are rather small, the cases of the largest specimens being 1.5-1.8 cm long. The frontoclypeus has its anterior half uniformly much darker than its posterior half and it is almost impossible to detect a well delineated "mushroom". The coxa and trochanter of the three legs are scarcely or not at all darker than the following segments, all of them being yellowish-brown. The (yellowish) spines and (black) seta on the posterior edge of the femur of the forelegs, are exactly like in the Sinai larvae, but on the posterior edge of the femur of the middle- and hindlegs I found a number of (yellow or yellowish) moderately long or short spines, which is decidedly higher than in the Sinai larvae: 3-5 on the middle legs, 2-5 on the hind legs — this being a good distinctive character. The gill formula in the largest 3 examined larvae, is here summarized in a table. Thus, the tendency towards bunches of 2-3 ill filaments still manifests itself, but the number of the filaments is generally much lower, there are never 4 filaments in a bunch, and never gills on segments VII-VIII.

Mac Lachlan (1883) considered the very small size of the adults from Gran Canaria as sign of the existence of "an insular race" which he named var. *canariensis*. The above mentioned peculiarities of the larvae show that he was possibly not wrong.

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