

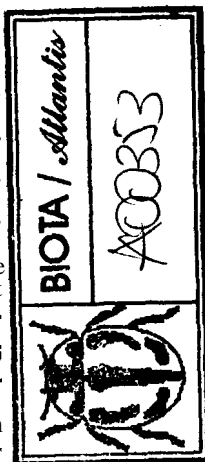
mini, LABOISSIÈRE (1927) men-
 re specimens, all male, one from
 and two from Ailole. I designate
 men from El Ure, carrying an
 type label, as the lectotype. One
 specimen from Ailole, in MCG,
 type label, but was not part
 of the original type series.
 Distribution. Southern Somalia (Map

Specimens examined: Somalia: Upper Juba.
 1913, 1 ex., lectotype (MZP); Lugh,
 1913, Patriz, 1 ex. (MCG); Ailole, Soina-
 I, VII, 1913, Cotype 1929 (see above),
 (MCG); Bardera, 1908, U. Ferrandi, 1 ex.
 Giuba, Bardera, Toncker IV-20, 1 ex.

References

LABOISSIÈRE, G. 1911: Schädlinge an Kulturpflanzen aus deutschen Kolonien. 1. — Mitt. entom. Mus. Berlin 5:259—273.
 LABOISSIÈRE, G. E. 1963: Galerucinae (Coleoptera Chrysomelidae). — Explor. Parc National d'Albora, Miss. de Saeger 40:77—130.
 LABOISSIÈRE, G. E. 1922: On Phytophagus Coleoptera of the family Chrysomelidae. — J. Afr. Uganda Nat. Hist. Soc. 17:3—17.
 LABOISSIÈRE, G. E. 1939: Colcoptem: Chrysomelidae. — Miss. Biol. Parc de Boiana II, Racc. ol. 1:564—615.
 LABOISSIÈRE, G. E. 1911: Über kolonialwirtschaftlich wichtige Coleopteren. — Deutsche Entomol. Zschr. 1911:499—508.
 LABOISSIÈRE, G. E. 1918: Diagnoses de Galerucini nouveaux d'Afrique [Col. Chrysomelidae]. — Bull. Soc. Entomol. France 1917:327—339.
 LABOISSIÈRE, G. E. 1921: Étude des Galerucini de la Collection du Musée du Congo belge. Première partie. — Rev. Zool. Afr. 9:33—86.
 LABOISSIÈRE, G. E. 1923: Descriptions de deux espèces et de six variétés nouvelles de Galerucini africains de la collection du British Museum. — Cull. Soc. Entomol. France 1923:206—208.
 LABOISSIÈRE, G. E. 1925: Supplément au Catalogus Coleopterorum, Pars 78 (Galerucinae), de J. Weise, précédé de remarques sur la classification des Galerucini. — Encycl. Entomol. Ser. B (11):33—62.
 LABOISSIÈRE, G. E. 1927: Liste des Galerucides récoltés dans l'Éthiopie Italienne et description d'une espèce nouvelle. — Boll. Soc. Entomol. Ital. 59:114—115.

- 1929: Galerucini africains de la collection du Musée Civique de Gênes. Première note. — Ann. Mus. Civ. Stor. Nnt. Giacomo Doria 53:319—353.
 — 1937: Galerucinae africains de la collection du Musée Civique de Gênes. Deuxième note. — Ann. Assoc. Naturalistes Levallois-Perret 22:139—184.
 — 1938: Coleotteri raccolti nei Borana (A.O.I.) dal Prof. E. Zavattari (1937). Chrysomelidac: Galerucinae. — Atti Mus. Civ. Stor. Nat. Trieste 14:139—148.
 — 1940a: Galerucinae (Coleoptera Phytophaga) Fam. Chrysomelidac. — Explor. Parc National Albert, Miss. de Witte (1933—1935) 31:1—93.
 — 1940b: Observations sur les Galerucinae de la collection du Musée du Congo et descriptions d'espèces nouvelles. — Rev. Zool. Bot. Afr. 33:295—312.
 LE PELLEY, R. H. 1968: Pests of Coffee. — 355 pp., Longmans, Green and Co. Ltd, London.
 SILFVERBERG, H. 1972: Aulacophorina from North-East Africa (Coleoptera, Chrysomelidae). — Notulae Entomol. 52:41—46.
 — 1973: A revision of the genus *Prosmidia* Weise (Coleoptera, Chrysomelidae). — Acta Zool. Fennica 139:1—54.
 — 1975: A revision of the genus *Laetiantha* Laboissière (Coleoptera, Chrysomelidae). — Notulae Entomol. 55:1—12.
 WEISE, J. 1904: Über bekannte und neue Chrysomeliden. — Arch. Naturgesch. 70(1):157—178.
 — 1905: Neue afrikanische Chrysomeliden und Coccinelliden. — Deutsche Entomol. Zschr. 1905:33—54.
 — 1907: Neue Chrysomeliden und Coccinelliden von der Ausbeute der Herren Oskar Neumann und Baron von Erlanger in Abyssinien. — Arch. Naturgesch. 73(1):210—232.
 — 1912: Chrysomelidae. — Wiss. Ergebn. Deutschen Zentral-Afrika-Exped. IV(7):127—163.
 — 1924a: Chrysomelidae: 13. Galerucinae. — Coleopterorum Catalogus 78, 225 pp.
 — 1924b: Zoological Results of the Swedish Expedition to Central Africa 1921. Insecta 7. Chrysomelidae und Coccinellidae. — Ark. Zool. 16(22):1—30.
 — 1927: Über bekannte und neue Chrysomeliden und Coccinelliden aus dem Reichsmuseum zu Stockholm. — Ark. Zool. 18 (A 34):1—34.
 WILCOX, J. A. 1972: Chrysomelidae: Galerucinae, Luperini: Aulacophorina, Diabroticina. — Coleopterorum Catalogus, Supplementa, 78:221—431.



Psocoptera from the Mid-Atlantic Islands and Morocco II

Martin Meinander

Abstract

MEINANDER, MARTIN: Psocoptera from the Mid-Atlantic Islands and Morocco II. — Notulae Entomol. 55:45—48, 1975.

Records of finds of Psocoptera are given for six species from the Azores, two from Madeira, nine from the Canary Islands and four from Morocco. *Elipsocus azoricus* sp. n. is described. *Psocotropos microps* (Enderlein) is new for the Canary Islands. *Epipsocus lucifugus* (Rambur) and *Lachesilla pedicularia* (Linne) are new for Madeira, and *Elipsocus azoricus* sp. n. and *Ectopsocus briggsi* McLachlan for the Azores. Several records are new for islands within the archipelagos.

Author's address: Dr. Martin Meinander, Zoological Museum, N. Jätävägs-gatan 13, SF-00100 Helsingfors 10, Finland.

The Psocoptera from the Mid-Atlantic Islands and Morocco are still rather poorly known. Up till now only six species have been known from the Azores (BADONNEL 1963), and the present material contains two additional species. Nine species have been definitely recorded from Madeira (BADONNEL 1963), two additional undetermined species have been reported (MEINANDER 1966), two new species are included in this material. The Canary Islands are perhaps the best investigated in the area with 23 definitely recorded species (MEINANDER 1973), and one new species in this material. Twenty-four species have been listed from Morocco (BADONNEL 1945 and MEINANDER 1956).

The present list is based on material in the Zoological Museum in Helsingfors, mainly collected by Richard Frey and Ragnar Storå on their journeys to Madeira and the Canary Islands in 1931 and to the Azores in 1738. The material was sent away for identification long ago and recently returned unidentified. I have also included some specimens collected by Håkan Lindberg in Morocco

in 1926 and Madeira in 1957, which were found in his collection when it was bought for the museum after his death.

List of species

Psocotropos microps (Enderlein, 1904)

The species has not been recorded earlier from the Canary Islands, although reported from Madeira (BADONNEL 1944/59). It has also been recorded from Cameroon, Zaire, Mozambique, Madagascar, Formosa and Java.

Canary Islands: Gran Canaria, Tafira, 1 ♂, Frey.

Epipsocus lucifugus (Rambur, 1842)

This species is distributed throughout Europe but has not been recorded before from the Mid-Atlantic Islands.

Madeira: Serra d'Agus, 1957-07-18...19, 3 ♀♀, Lindberg.

Caccilius flavidus (Stephens, 1830)

A very common species in Europe, recorded from the Azores (São Miguel) and the Canary Islands. The present material includes specimens from three additional islands of the Azores,

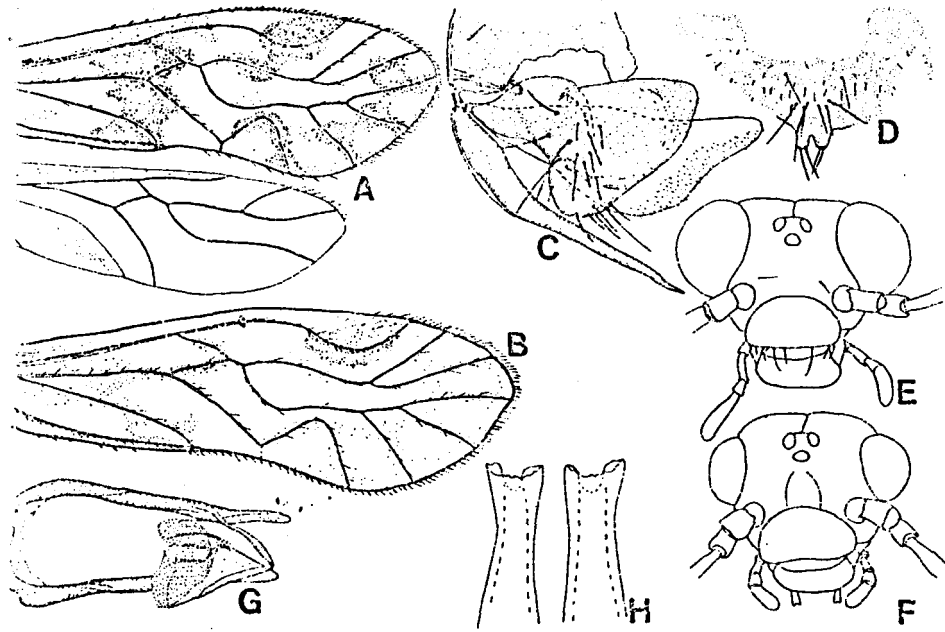


Fig. 1. *Elipsocus azoricus*. A, wings of female, B, fore wing of male, C, female gonapophyses, D, female subgenital plate, E, male head, F, female head, G, phallosome, H, laciniae.

Azores: Flores, Ribeira da Cruz, 2 ♀♀, Storå; Flores, 1 ♀, Storå; Sta Cruz, 3 ♀♀, Storå. — Pico, Silveira, 3 ♀♀, Storå. — Terceira, Bagacina, 2 ♀♀, Frey. — São Miguel, Furnas, 2 ♀♀, Frey.

Caecilius ferrugineus Badonnel, 1945

The Moroccan material contained three specimens which are tentatively identified as *C. ferrugineus*. They agree well with BADONNEL's description, except that he states that the male paraclypeus has two acute tubercles, whereas

the present male has only one broad tubercle. The specimens known so far, the type series, are from Agadir. Morocco, Safi, 1926-05-07-08, 1 ♂ 2 ♀♀, Lindberg.

Caecilius fortunatus Enderlein, 1929

Canary Islands: Tenerife, La Esperanza, 1931-08-16, 2 ♂♂, Frey; Tacoronte, 2 ♂♂, Storå; Pico da Formosa, 1 ♂ 1 ♀, Storå.

Graphopsocus cruciatus (Linné, 1765)

Canary Islands: Tenerife, Los Mercedés, 1 ex., Storå. — Morocco: Mogador, 1926-05-09-14, 1 ex., Lindberg.

Elipsocus brincki Badonnel, 1963

The species has earlier been recorded only from São Miguel in the Azores. Azores: São Jorge, Ribeira do Salto, 1938-06-18-23, 1 ♀, Frey. — São Miguel, Furnas, 1938-05-19-24, 3 ♂♂ 3 ♀♀, Frey, Lagos Canario, 1 ♂ 1 ♀, Frey.

Elipsocus azoricus Meinander, sp. n.

Type: ♂ holotype; Azores, São Miguel; Zoological Museum, Helsingfors.

Head in all but one female almost unicolorously brown. Head of male, Fig. 1E, of female, Fig. 1F. Vertex dark brown, slightly paler medially on each epicranial plate. (In one female from São Jorge the vertex is yellowish, and the epicranial plates laterally bordered

by two rows of brown dots.) Epicranial suture black. Ocellar lobe dark blackish brown. Frons ochreous brown, medially with a dark vertical line. Postclypeus ochreous brown with slightly paler stripes. Anteclypeus pale. Labium, genae, palpi and antennae dark brown. Eyes black or deep grey.

Length of antennae 2.6 mm (♀) — 3.0 mm (♂), f_1 ♂: 0.60—0.64 mm, ♀: 0.50—0.54 mm, f_2 ♂: 0.46—0.50 mm, ♀: 0.40 mm, f_3 ♂: 0.40 mm, ♀: 0.36 mm, f_4 ♂: 0.34—0.36 mm, ♀: 0.26—0.28 mm. IO/D ♂ 0.93—1.08, ♀: 1.80—2.00. PO ♂: 0.79—0.86, ♀: 0.60. Lacinia of female, Fig. 1H.

Thorax unicolorous dark brown except for a pale longitudinal median line on dorsum.

Legs dark brown. Measurements of hind leg: ♂: F : 0.56 mm, T : 1.20 mm, ti : 0.40 mm, tz : 0.07 mm, ts : 0.11 mm, rt : 5.7:1.0:1.6. First tarsal segment with two spurs and 14 ctenidia, t_2 without ctenidia. ♀: F : 0.60 mm, T : 1.12—1.16 mm, ti : 0.34 mm, tz : 0.07 mm, ts : 0.11 mm, rt : 4.9:1.0:1.6. First tarsal segment with two spurs and 14 ctenidia, t_2 without ctenidia.

Wings of female, Fig. 1A, fore wing of male, Fig. 1B. The wing: are hyaline and marked with brown as in the figures. In the male the markings vary in distinctness from rather vague, as shown in Fig. 13, to as well defined as in the female. Length of fore wing ♂: 3.0—3.2 mm, ♀ 2.8—3.1 mm, of hind wing ♂ 2.4 mm, ♀: 2.1—2.3 mm. Cu_2 in fore wing setose.

The colour of the abdomen could not be studied.

Male genitalia. Phallosome, Fig. 1G, closed both anteriorly and posteriorly.

Female genitalia. Subgenital plate, Fig. 1D, the two posterior lobes rather close to each other, terminally with 2—3 setae. Gonapophyses, Fig. 1C.

E. azoricus is closely related to *E.*

alettæ Smithers (SMITHERS 1962) from Zambia, the wing markings being almost identical. They can be separated on biometric characters and certain characters of the female genitalia; in *E. alettæ* the lobes of the subgenital plate are farther apart and the costernal valvae are broader than long, whereas in *E. azoricus* they are distinctly longer than broad.

Azores: São Miguel, Furnas, 1938-05-19-21, 2 ♂♂ holotype, Storå; 1938-05-19-24, 2 ♂♂, Frey; 1938-07-23-08-01, 1 ♂, Frey; Ribeira Grande, 1938-05-26, 1 ♀, Frey. — São Jorge, Ribeira do Salto, 1938-06-18-23, 2 ♀♀, Rey.

Trichopsocus acuminatus Badonnel, 1943

This widespread Mediterranean species is recorded for the first time from São Jorge, Terceira and Tenerife.

Azores: São Jorge, Calheta, 1938-06-21, 2 ex., Frey. — Terceira, Bagacina, 1938-07-17, 2 ex., Storå. — São Miguel, Furnas, 1938-05-19-21, 2 ex., Frey, 2 ex., Storå; 1938-05-22-24, 1 ex., Frey; 1938-07-23-08-01, 6 ex., Frey.

Canary Islands: Tenerife, Tacoronte, 3 ex., Frey & Storå; Ovotava, 4 ex., Frey. — Gran Canaria, Atalaya, 1931-06-25, 2 ♂♂, Frey.

Ectopsocus briggsi McLachlan, 1899

This species with a world-wide distribution has not been recorded before from the Azores and La Palma.

Azores: Flores, Ribeira da Cruz, 1938-06-16, 2 ex., Storå; Vales, 1 ex., Storå. — São Jorge, Calheta, 1938-06-14-20, 1 ex., Frey; 1938-06-21, 1 ex., Frey; 1938-06-22-28, 1 ex., Frey; Ribeira do Salto, 1938-06-18-23, 2 ex., Frey. — Pico da Formosa, 1938-07-07, 3 ex., Storå. — Terceira,

Bagacina, 1938-07-17, 6 ex., Frey, 1 ex., Storå; Angra do Heroísmo, 1 ex., Frey. — São Miguel, Furnas, 1938-05-19-21, 1 ex., Storå; 1938-07-23-08-01, 5 ex., Frey; Ponta Delgada, 1938-05-14-16, 2 ex., Storå; Sete Cidades, 1938-05-17, 2 ex., Storå.

Canary Islands: La Palma, La Caldera, 1931-05-07, 1 ♂, Frey. — Tenerife, Ovotava, 1 ♂ 3 ♀♀, Frey; Tacoronte, 1 ♀, Frey.

Lachesilla grideili (Navas), 1927

The species was described from specimens taken in Italy, Genova, on bananas imported from Las Palmas (Gran Canaria), and redescribed by me (MEI-

NANDER 1973:146) from specimens from Hierro and Gomera. The occurrence on Gran Canaria supports my assumption that the species described by me is conspecific with that of Navas.'

Canary Islands: Gran Canaria, Tafira, 1 ♀, Frey.

Lachesilla pedicularia (Linné, 1758)

This cosmopolitan species is recorded for the first time from Madeira,

Madeira: Ribeira Frio, 1931-05-03, 1 ♂, Storå.

Atlantopsocus chopardi Badonnel, 1944

So far, the species is known only from São Miguel.

Azores: São Miguel, Furnas, 1938-08-19.-21, 1 ♂, Storå; 1938-07-23.-08-01, 1 ♂, Frey; Lagos do Fogo, 1938-08-02, 1 ♂, Frey; Ponta Delgada, 1938-05-14.-16, 1 ♀, Storå.

Atlantopsocus personatus lesnei (Badonnel, 1944)

Canary Islands: Gran Canaria, Tafira, 1 ♂, Storå.

Atlantopsocus personatus leucophebius (Navas, 1916)

Canary Islands: Tenerife, Tacoronte, 1 ♀, Frey.

Blaste balli Badonnel, 1945

Morocco: Mogador, 1926-08-07.-14, 1 ♂, Lindberg; Atlas mal. Nerata, 1926-05-29.-06-15, 2 ♀♀, Lindberg.

Rhaptoneura eatoni (McLachlan, 1880)

Canary Islands: La Palma, El Paso, 1931-08-20, ex., Frey. — Tenerife, Tacoronte, 1 ex.,

Morocco: Mogador, 1926-05-09.-14, 2 ex., Lindberg.

References

- BADONNEL, A. 1944: Contribution à l'étude des Psocoptères de l'Atlantide. — Rev. Française Entomol. 11:47-60.
 — 1935: Contribution à l'étude des Psocoptères de l'Afrique. — Rev. Française Entomol. 12:11-20.
 — 1963: Sur les Psocoptères des Açores et de Madère. — Bol. Mus. Municipal Funchal 17:66-78.
 MEINANDER, M. 1966: Psocoptera from the Mid-Atlantic Islands and Morocco. — Notulae Entomol. 46:107-121.
 — 1973: The Psocoptera of the Canary Islands. — Notulae Entomol. 53:141-158.
 SMITHERS, C. N. 1962: New species and records of Ellipsocidae from Africa (Psocoptera). — J. Entomol. Soc. S. Africa 25:255-262.