

**RESULTS OF THE CZECHOSLOVAK-IRANIAN ENTOMOLOGICAL
EXPEDITIONS TO IRAN 1970, 1973 AND 1977****Heteroptera, Leptopodidae**

LUDVÍK HOBERLANDT

Department of Entomology, National Museum (Nat. Hist.), Praha

This paper is based on the study of Leptopodid specimens taken primarily by three expeditions of National Museum (Nat. Hist.), Praha to Iran in 1970, 1973 and 1977. The study material is represented by only 70 specimens and contains 6 species representing 4 genera.

Despite this small collection, I think, there undoubtedly are collected all species of the family Leptopodidae occurring in arid Iran. The Leptopodidae comprise very small family and the few Iranian species occur generally in rather different habitats.

Family LEPTOPODIDAE Costa, 1838

Erianotus ianosus (Dufour, 1834)

1 ♂ and 1 ♀ — W. Iran, Azarbaidjan, Zayandeh Rud, 2200 m., 50 km. W. of Kuhrang, 1. 7. 1970 (loc. no. 38); 1 ♂ and 3 ♀♀ — N. Iran, Mazandaran, E. Elborz, Gazanak, Hazar Chay, 1400 m., 20.—21. 7. 1970 (loc. no. 63); 1 ♀ — S. Iran, Hormozgan 40 km. S. E. of Minab, 21. 5. 1973 (loc. no. 205); 1 ♂ — S. Iran, Hormozgan 20 km. S. E. of Minab, 21. 5. 1973 (loc. no. 208); 5 ♂♂ and 1 ♀ — S. Iran, Fars; Zagros Mountains, Yassuj, 1800 m., 16. 6. 1973 (loc. no. 243); 4 ♀♀ — N. W. Iran, Azarbaidjan, 30 km. N. W. of Mianeh, 5. 7. 1973 (loc. no. 265). Collected by the Czechoslovak-Iranian expeditions.

Further material examined: 1 ♀ — N. Iran, Karadj, 1200 m., 23. 6. 1960. Collected by J. Klapperich.

The specimens collected in Iran in numerous localities occurred in biotopes of very different characters. The exemplars from Yassuj and Kuhrang in the Zagros Mountains were collected on medium-sized stones near water at the altitude 2000—2200 m., in the high mountains of a rather arid character. Specimens from lowland of Minab in S. Iran were collected in waterless salty area and, on the contrary, specimens collected in Alborz Mountains occurred on stones in the river Haraz at an altitude of 1400 m. in completely wet Caspian conditions. After all the locality Mianeh in Azarbaidjan is of evidently semi-desert character with rather reduced watercourses on montane plains. Wide patterns of habitat of

Erianotus lanosus (Dufour) corresponds to its rather wide distribution. It is a species of Holomediterranean distribution, in Europe penetrating northwards as far as Hungary. The species has a rather wide distribution through Soviet Middle Asia; in the Middle East recorded from Cyprus, Syria, Iraq and recently from Turkey (C. Anatolia, Hassanoglan, 17. 7. 1947 collected by L. Hoberlandt — 1 ♂, first record) and Iran. In Iran previously recorded only from North Iran, Shaku by Kiritshenko 1952 (as *Erianotus inumbratus* Kiritshenko, 1952, syn. by Cobben, 1969).

Further material from Near East examined: E. Afghanistan, Tangi-Gharuh, upon Kabul river, 1600 m., 20. 9. and 30. 10. 1952 — 2 ♂♂ collected by J. Klapperich. C. Afghanistan, Kankarah Sarkhat, 10. 1. 1958 (loc. no. 431) — 1 ♀ collected by K. Lindberg.

Previously not recorded from Afghanistan (first record).

***Leptopus hispanus* Rambur, 1842**

1 ♂ — N. W. Iran, Azarbaijan 23 km. S. W. of Marand, 17. 8. 1970 (loc. no. 154). Collected by the Czechoslovak-Iranian expedition.

Species of wide Holomediterranean distribution, penetrating to S. W. Asia and Soviet Middle Asia. In the Middle East recorded from Israel, Syria, Turkey and Iran. In Iran recorded from Dezashu near Tehran by Kiritshenko 1952.

Further material from Near East examined: Afghanistan, Tang-Djangal Bar (Hezaradjat), 23. 8. 1957 (loc. no. 243) — 3 ♂♂ and 1 ♀ collected by K. Lindberg.

Previously not recorded from Afghanistan (first record).

***Leptopus decus* Drake, 1955**

Leptopus decus Drake, 1955 Proc. Ent. Soc. Washington 57: 201—202

Female. Length 3.19—3.77 mm, width 0.89—0.96 mm. Head: length 0.61—0.67 mm., width across eyes 0.93—1.02 mm. Antennae: length of segment I., 0.2 mm., II., 0.46 mm., III., 0.99 mm., IV., 0.38 mm. Pronotum: length 0.77 mm., width 0.93 mm. (anteriorly 0.47 mm). Scutellum: length 0.35 mm., width 0.29 mm.

Moderately sized, general shape of the body elongate, 2.4—2.6 times as long as broad, anteriorly narrowed and widened nearly in the middle of the length of hemelytra, costal margin of hemelytra being conspicuously expanded. Pale yellowish brown or dark brown.

Head transverse, 1.6 times as broad as long, eyes strongly projecting laterally and slightly tending anteriorly, eyes with a few short fine hairs. Occipital area annularly constricted to fit in pronotal collar, head dorsally between eyes with dense decumbent silvery hairs, some long erect bristles at the posterior part of head near to eyes and with one long hair anteriorly on notched inner margin of eye. Ocellar tubercle not conspicuously prominent, ocelli separated from each other by less than diameter of an ocellum, ocellar tubercle provided anteriorly with two long fine hairs. Fronto-clypeal region with three pairs of long brist-

les, gular region with three pairs of fine long hairs and near to lower margin of eye with two long bristles. First labial segment laterally on each side with three extremely long curved spines, second segment, being the longest with two rather smaller but similarly adapted ones, third segment without spines. Antennae very long and slender, first segment with a few short erect hairs, spindle shaped, widest in the middle of length, second segment slender, subapically slightly clavate, third and fourth segments very slender, thread-like, the third being 2.5–2.6 times longer than fourth.

Pronotum 1.3 times as long as broad, in posterior third strongly constricted and anteriorly conspicuously narrowed, hind pronotal lobe slightly higher and more convex than the front lobe, which in the middle is longitudinally depressed. Lateral margin of the pronotum along the whole length distinctly lamellate, lateral angles of hind pronotal lobe subangulate, and broadly flattened, sharply delimited from posterior pronotal disc. Pronotal surface rugulose, deeply puncturate on hind lobe, beset with very few short pale hairs and with numerous regularly dispersed long curved hairs which have a wide base. Pronotum divided by a deep transverse ridge which is in the middle bridged over by two longitudinal ribs. Scutellum triangular, 1.16—twice as long as broad, margins rather straight, slightly elevated, anterior angles with one erect spine with rather wide base. Underside of thorax with short, depressed, sparse, pale hairs, anterior acetabula with 2 or 3 long curved bristles.

Legs slender and very long, anterior trochantera rather long and stout, anteriorly with three stout spines and posteriorly with two or three rather shorter ones. Anterior femora anteriorly slightly narrowed, below exteriorly with a row of three stout curved spines from black roundish widened bases and inside with two similar smaller ones, femora otherwise with some small irregularly dispersed bristles. Tibiae slightly irregularly sinuate, apically slightly widened, with two rows of (or 4 large curved) spines, similarly formed to those on femora and with sparse very short bristles rather more concentrated apically. Middle and hind femora very slender and subapically narrowed, with some very short bristles. Tibiae linear with fine pubescence.

Hemelytra of a length much exceeding the apex of the body, anteriorly narrow, nearly parallel-sided, as wide as the width of pronotum and conspicuously roundedly widened and from middle of its length towards the apex in sinuate outline narrowed. Corium and clavus with evenly spaced areolae. Emboliar margin suberect, posteriorly distinctly narrowed (anteriorly about twice as broad as posteriorly), emboliar margin along the whole length finely serrate, posteriorly more finely, with short nearly insignificant hairs, only anterior part of emboliar margin with seven long curved hairs which arise from distinct, elevated, dark pits. Corium and clavus with numerous regularly dispersed fine, rather long, curved bristles growing from widened dark base.

Venter rather convex with fine pubescence.

General colour of the body brown and pale yellowish brown. Pronotum, eyes and scutellum brown, legs and antennae pale, apices of tibiae

and apical segment of tarsi darkened, rostrum pale, apical segment dark brown. Scutellum basally brown, apical half yellow. Anterior part of hemelytra narrowly darkened, otherwise pale and dark marbled, spines dark. Venter brown, ventrites laterally yellowish spotted, seventh segment and female genital segments dark brown. Thorax dark brown, anterior acetabula yellowish.

1 ♀ — S. E. Iran, Baluchistan, Kuh-e Taftan, upper end of the Taimandan Valley, 2200 m., 18. 4. 1973 (loc. no. 168). Collected by the Czechoslovak-Iranian expedition.

Further material examined: 1 ♀ — E. Afghanistan, Nuristan, Bashgul Valley, 8. 4. 1953. Collected by J. Klapperich.

For the purpose of the redescription, besides the two females from Iran and Afghanistan, I examined another female from the collection of the British Museum (Nat. Hist.) in London. It is a mounted specimen with round red bordered label bearing „Type“, red angular label „Paratype“ and name „*Leptopus decus* Drake“, with locality-label „India, Punjab, Kernal, II. 1928, P. J. Barrand“. Angular white label „Brit. Mus. 1955 — 22“. Determination label written by C. J. Drake „*Leptopus decus* Drake, Type“.

This species is previously known only from the type-locality Kernal, Punjab in N. W. India. Both the above mentioned records from Iran and Afghanistan are first records, besides the type-locality.

Key to the Middle East species of the genus *Leptopus* Latreille

1. Exterior margin of hemelytra irregularly sinuate, anteriorly shortly straight and then conspicuously roundedly widened and towards the apex distinctly narrowed posteriorly, anteriorly about twice as broad as posteriorly, exterior border along the whole length finely serrate, posteriorly rather more finely, with very short nearly insignificant hairs, only anteriorly with seven distinct curved hairs, which arise from distinct dark pits. Pronotum entirely dark coloured, more or less shiny *L. decus* Drake
 - Exterior margin of hemelytra along the whole length regularly, symmetrically moderately sinuate, exterior border either entire without any distinct bristles or along the whole length with large number of distinct stout curved bristles arising from dark pits 2.
 2. Exterior border of hemelytra along the whole length with 34—36 stout bristles, posteriorly diminished, arising from dark distinct pits, emboliar margin posteriorly distinctly narrowed. Corium and clavus with stout curved, basally thickened bristles arising from dark distinct pits. Pronotum rugous with distinct disperse punctures and globulars and stout bristles arising from dark distinct pits, entirely dull. Spines of anterior legs on bases slightly thickened. Dark coloration of the body in general not sharply delimited, marbled, pronotum entirely dark coloured *L. marmoratus* (Goeze)
- Species of European distribution, previously not recorded from Near

East — Syria: Bakish, 1650 m., 10. 5. 1953 — 1 ♂; Lebanon: Wadi Jakhnam, near Nahr Meshmish, prov. Tripolis (loc. no. 209) — 1 nymph. Collected by K. Christiansen. The records from Syria and Lebanon are the first ones from the whole region in question.

- Exterior border of hemelytra entire, without any distinct bristles, emboliar margin along the whole length of nearly equal width. Corium and clavus with fine simple hairs. Pronotum smooth, shiny with only sparse venishing shallow punctures and fine simple hairs. Spines of anterior legs, mainly of tibiae extremely stout and arising from dark distinct globulars. Dark coloration of the body sharply delimited, anterior part of pronotum yellowish or brown. *L. hispanus* Rambur

Patapius spinosus (Rossi, 1790)

1 ♀ — N. Iran, Tehran-Evin, 19. 7. 1975 (by light trap). Plant Pests and Diseases Research Institute, Tehran.

Species of wide Holomediterranean distribution, penetrating to S. W. Asia and Soviet Middle Asia. From Iran previously not recorded (first record). In S. W. Asia recorded from Syria and Israel. *Patapius spinosus* (Rossi) is the only representative of the Leptopodidae known to occur in the Western Hemisphere.

Further material examined from Near East: Syria: Bahr Ataibe, 7.—10. 4. 1953 (loc. no. 235 c) — 18 ♂♂ and 27 ♀♀. Collected by K. Christiansen. Lebanon: Wadi Jakhman, near Nahr Meshmish, prov. Tripolis (loc. no. 209) — 2 nymphs. Collected by K. Christiansen (first record). Iraq: Baghdad, 4. 1929 — 2 ♂♂. Collected by V. Kálalová (first record). S. Jordan: Madaba, 600 m., 13. 1. 1957 — 4 ♂♂ and 3 ♀♀; E. Jordan: Amman, 800 m., 6. 3. 1958 — 5 ♂♂ and 2 ♀♀. Collected by J. Klapperich (first records). Afghanistan: Bend Amir, 1. 8. 1957 (loc. no. 280) — 1 ♀; Pol Amam Bogri (Aqichah), 2. 11. 1957 (loc. no. 280) — 1 ♀; Gaisar, 26. 10. 1957 (loc. no. 406) — 1 ♂ and 3 ♀♀. Collected by K. Lindberg (first records).

Patapius sentus Drake and Hoberlandt, 1950

1 ♀ — S. E. Iran, Baluchistan, 16 km. S. E. of Tang-e Sarke, 61 km. N. N. W. of Nikshahr, 10. 4. 1973 (loc. no. 154). Collected by the Czechoslovak-Iranian expeditions.

One male collected on large stones in a broad mountain valley (900 m.) with a narrow torrent at the bottom. The only specimen has been collected on stones under direct strong solar-radiation, remote from water-source.

Species described from Egypt (type-locality Helwan) and further recorded from Israel, Ain Gedi (Linnavuori, 1961). Previously not recorded from Iran (first record).

Further material examined: 1 ♀ — E. Afghanistan, Nuristan, Bashgul Valley, 1200 m., 8. 4. 1952. Collected by J. Klapperich.

Previously not recorded from Afghanistan (first record).

Valleriola assouanensis Costa, 1875]

1 ♂ and 3 ♀♀ — S. Iran, Hormozgan, Issin, south slopes of Kuhha-ye Genu, 45 km. N. W. of Bandar Abbas, 11.—15. 5. 1973 (loc. no. 198); 2 ♂♂ S. Iran, Hormozgan, Faryab, Rud-e Rudan, 350 m., 17.—18. 5. 1973 (loc. no. 201); 27 ♂♂ and 11 ♀♀ — S. Iran, Hormozgan, Issin, south slopes of Kuhha-ye Genu, 45 km. N. W. of Bandar Abbas, 25. 5. 1973 (loc. no. 213); 3 ♂♂ and 1 ♀ — S. Iran, Hormozgan, Kuhha-ye Genu, south slopes, 400—600 m., 1.—4. 5. 1977 (loc. no. 321); 2 ♂♂ and 1 ♀ — S. Iran, Hormozgan, Derpehan, 12 km. E. of Senderk, 300 m., 11.—12. 5. 1977 (loc. no. 326). Collected by the Czechoslovak-Iranian expeditions.

The specimens collected on localities no. 198, 213 and 321 flew quickly on large stones among the numerous water pools on the bottom of deep canyons in the south area of Genu mountains, 5 km. N. W. of casis Issin. At the bottom of canyons with steep clayish slopes day temperature exceeded 50 °C. The specimens collected near Senderk occurred on stony banks of a brook in a very large open valley under rather hot conditions. The specimens collected near Issin were more abundant in 1973 than in 1977.

Species scarcely distributed in Egypt, India, Ceylon nad Iran; from Iran recorded by some authors: Oshanin 1906 (Persia), Reuter 1912 (Pe), Horváth 1911 (Perse orientale), Drake and Hoberlandt 1950 (Persia), Seidenstücker 1957 (S. E. Iran, Baluchistan, pass N. of Karvandar, 1335 m., 16. 6. 1954 — the only correct Iranian locality).

Besides Iran there is a further record from Afghanistan — E. Afghanistan, Tangi-Ghareh upon Kabul river. 1600 m., 21. 8. 1952 — 5 ♂♂ and 2 ♀♀ collected by J. Klapperich (first record).

Summary

Of the Leptopodid fauna of Iran there are at present recorded 6 species belonging to 4 genera.

Three species are noted as first records to the fauna of Iran *Patapius spinosus* (Rossi), species with wide Holomediterranean distribution, *Patapius sentus* Drake and Hoberlandt, species ranging in Near East from Egypt to Afghanistan and *Leptopus decus* Drake, species known from India and recently from Iran and Afghanistan. Other species occurring in Iran are *Erianotus lanosus* (Dufour) and *Leptopus hispanus* Rambur, both with wide Holomediterranean distribution and *Valleriola assouanensis* (Costa) ranging in Egypt, India, Ceylon, Iran and Afghanistan.

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