

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

IZYASLAV M. KERZHNER

Zoological Institute, Academy of Sciences of the USSR, Leningrad

The paper is based on examination of five collections indicated below:

Coll. NMP — collection of the National Museum in Prague. All material is collected by Czechoslovak-Iranian entomological expeditions in 1970, 1973 and 1977 (see Hoberlandt, 1974, 1981 and 1983 for details). It includes about 670 specimens belonging to 11 species. All species are already known from Iran (Kerzhner, 1981), but their distribution and variability in Iran are greatly precised by these materials. Some specimens collected by the Czechoslovak-Iranian expedition in Turkey are added.

Coll. PIT — collection of the Plant Pests and Diseases Research Institute, Tehran-Evin. This small material is to date conserved in coll. NMP. It was partly published by Hoberlandt (1954, 1959) and by Kerzhner (1981 — paratypes of *Aptus transcaucasicus*).

Coll. KL — material collected by J. Klapperich and received via coll. NMP. 30 specimens belonging to 5 species.

Coll. USNM — collection of the U. S. National Museum of Natural History, Washington. 34 specimens belonging to 5 species.

Coll. ZIN — collection of the Zoological Institute, Academy of Sciences of the USSR, Leningrad. It includes 300 specimens of 14 species collected by different persons from the end of XIX. century (a review of collectors and their routes is given by Kiritshenko, 1949, see also Zarudny, 1899, 1902, 1905). A list of most specimens collected by D. M. Steinberg is already published by Kiritshenko (1966), some specimens of *Nabis pseudoferus* are mentioned by Remane (1962) and all materials are used for records of species from Iran by Kerzhner (1981).

Literature data are also included in this paper, except unverified records of *Nabis* s. str. published before taxonomic revision of this group or based on unprepared females, and namely of *N. ferus* by Lindberg (1938), of *N. palifer* and *N. punctatus* (= *feroides*) by Wagner (1961) and of *N. pseudoferus* by Miyamoto (1963).

In all 14 species of Nabidae are known to date from Iran. Judging from distribution in the adjacent parts of the USSR finds of following additional species in N. and NE Iran are more or less probable: *Nabis ferus* Linnaeus (known from Transcaucasia and northern slope of Kopetdagh Mts.), *N. remanei* Kerzhner (known from the northern slope of Kopetdagh Mts.) and *N. sinoferus sinoferus* Hsiao (the nearest to Iran records are from the Murgab valley in the USSR).

The localities are listed in the sequence of collecting dates. If identical for two or more successive records, parts of Iran are indicated only under the first and collector only under the last. With few exceptions no attempt was made to verify or unify the spelling of geographic names used in the labels.

For keys, descriptions, figures, data on general distribution and ecology see Kerzhner (1981).

I am thankful to Dr. L. Hoberland for the material of NMP, KL and PIT collections and to Dr. Th. J. Henry for specimens of USNM collection.

***Aptus mirmicoides* (O. Costa, 1834)**

Coll. NMP: N. Iran, 10 km S Behshahr, 480 m, 23.—24. 6. 77 1 5th instar larva (loc. no 380); Sheykh Mahallen, 160 m, 28. 6.—3. 7. 77, 2 5th instar larvae (loc. no 390); Chalus, 4. 7. 77, 1 brachypterous ♀ (loc. no 393); 15 km SW Chalus, 490 m, 4. 7. 77, 1 brachypterous ♀ (loc. no 394).

Coll. ZIN: Astrabad (now Gorgan), 14. 4.—5. 5. 74, 1 ♂, 9 ♀♀, all brachypterous; mouth of the r. Karasu (falling into Gorgan bay), 7. 6. 74, 1 5th instar larva (Kiritshenko).

Previously recorded by Kerzhner (1981) from Gorgan and by Kerzhner and Rieger (1985) from Mazandaran (near Amol) and Azarbaijan (Kalibar — Makidi).

***Aptus maracandicus* (Reuter, 1890)**

Coll. NMP: N. Iran, 8 km NE Ziaren, 2400 m, 10.—16. 7. 77, 2 5th instar larvae (loc. no 400).

Coll. PIT: Khorssan, Kopedagh — Allahakbar, 1950 m, 16. 6. 74, 5 ♂♂, 5 ♀♀, all macropterous; Khorassan, Zoschk — Binaloud, 2000 m, 19. 6. 74, 1 macropterous ♂ (Radjabi, Pazouki).

Coll. ZIN: Tash, 7813 ft, 10. 5. 14, 1 brachypterous ♂; Shahrud, 25. 5. 17, 1 brachypterous ♂; Shahkuh-pain, 5. 7. 14, 1 brachypterous ♀ (Kiritshenko).

Previously recorded from Iran by Kerzhner (1981).

The larvae (as well imago) of *A. maracandicus* can be distinguished from these of *A. mirmicoides* by shorter second antennal segment, its length in 5th instar larvae equals about 1.35 mm in *A. maracandicus* and about 1.5 mm in *A. mirmicoides*.

***Aptus transcausicus* Kerzhner, 1981**

Coll. NMP: S. Iran, Kushk N Masiri, 1800 m, 12. 6. 73, 1 macropterous ♂ (loc. no 237); 48 km N Masiri, 2230 m, 12. 6. 73, 1 macropterous ♂, 3 macropterous ♀ (loc. no 238); Zagros, Sisakht, 2400 m, 13.—15. 6. 73, 1 brachypterous ♀ (loc. no 240); 7 km NW Shul, 2100 m, 17. 6. 73, 2 brachypterous ♀ (loc. no 247).

Coll. PIT: Ghorogh, 25. 10. 49, 1 brachypterous ♀, paratype (Abas-pour); Bakhtiari, 28. 7. 50, 1 brachypterous ♀ (collector not indicated); Varamin, Mt. Gharaghadj, 10. 9. 57, 1 ♂, 1 ♀, both brachypterous, paratypes (Safavi).

Coll. KL: Wallenbachtal, Elbursgebirge 1700 m, 13.—20. 10. 61, 1 brachypterous ♀.

Coll. USNM: Lurestan, 50 km SW of Borudjerd, 28. 4. 65, 1 brachypterous ♀ (J. W. Neal).

Coll. ZIN: Tadjrish near Tehran, 12.—25. 6. 27, 1 4th instar larva (Siazov); Zergende near Tehran, 14. 2. 35, 1 brachypterous ♀, paratype; Dezashu near Tehran, 3. 11. 38, 1 brachypterous ♀, paratype (Jenjourist).

Previously recorded from Iran by Kerzhner (1981).

S. Iran specimens differ in some external characters from these of more northern populations. In brachypterous specimens from S. Iran hemelytra reach the middle of IV or even the middle of V tergite, clavuses contact behind the scutellum in their whole length, as in *A. mirmicoides*. In all S. Iran specimens the hind lobe of pronotum is with a distinct longitudinal brown stripe and with some diffuse brownish spots at both sides of it, hemelytra are dirty yellow with large confluent light brown spots, mostly in the hind half of clavus and hind two thirds of corium. In brachypterous females from S. Iran pronotum width is 1.95—2, abdomen width 3—3.25 mm (in brachypterous females of *A. mirmicoides* from Iran pronotum width about 1.75 mm). In macropterous specimens the size is as follows: body length ♂ 7.5—8, ♀ 7.9—8.4, pronotum width ♂ 1.95—2, ♀ 2.1—2.2 mm.

All specimens from S. Iran are collected in E. Zagros Mts. at slopes covered by *Quercus brantii*, various shrubs and steppe vegetation.

***Halonabis sareptanus* (Dohrn, 1862)**

Coll. NMP: NW Iran, 21 km E Marand, 18. 8. 70, 1 ♀ (loc. no 98); E. Iran, Mohammadabad, 1600 m, 3.—5. 5. 73, 1 ♀ (loc. no 187); Dowlatabad, 8.—9. 5. 73, 11 ♂♂, 27 ♀♀ (loc. no 192); 24 km SSW Hadjiabad, 9.—10. 5. 73, 1 ♀ (loc. no 194); S. Iran, 7 km W Kahkom, 27.—28. 5. 73, 1 ♀ (loc. no 215); Korsiah, 29.—30. 5. 73, 1 ♀ (loc. no 220); Ahram, 45 km ESE Bushehr, 19.—20. 4. 77, 1 ♂, 2 ♀♀ (loc. no 301); Sanderk, 220 m, 12.—13. 5. 77, 2 ♂♂ (loc. no 327); Chān-e Barqeh, 35 km S Kahnuj, 650 m, 15.—16. 5. 77, 1 ♂, 1 ♀ (loc. no 332); 43 km N Kahnuj, 540 m, 16.—17. 5. 77, 1 ♂, 1 ♀ (loc. no 334); C. Iran, 30 km N Sabzevaran, 1650 m, 17.—19. 5. 77, 2 ♂♂, 2 ♀♀ (loc. no 337); 16 km W Sabzevaran, 820 m, 19.—20. 21.—22. 5. 77, 1 ♀ (loc. no 343); E. Iran, Kuh-e Khvajeh, 3.—5. 6. 77,

1 ♂, 5 ♀♀ (loc. no 357); 36 km N Gonabad, 830 m, 7.—8. 6. 77, 28 ♂♂, 14 ♀♀ (loc. no 361); NE Iran, 10 km W Sabzevar, 15.—16. 6. 77, 1 ♀ (loc. no 368).

Coll. PIT: Polgui, Sistan, 11. 4. 50, 1 ♀; Zabol, Sistan, 4. 6. 50, 1 ♂ (Mirzayan); lac Ghom, 27. 6. 69, 1 ♀ (M. A. B.); same locality, 10. 9. 69, 1 ♀ (Morr. Abai); Khouzestan, Ahvaz, Mollasani, 20 m, 16. 5. 75, 2 ♀♀ (Pazouki, Boroumand).

Coll. ZIN: Nasirabad, Sistan, 12. 5. 98, 1 ♀; Avsellabad, Sistan, 31. 5. 98, 1 ♀; Neizar, NW Sistan, 13.—19. 9. 98, 17 ♂♂, 11 ♀♀; locality Parag, sea shore, Makran, 17. 3. 01, 1 ♂; Husseinabad, Sistan, 26.—29. 5. 01, 1 ♀ (Zarudny); Aliabad, prov. Tehran, 13. 3. 04, 1 ♀; Menzerie, prov. Tehran, 14. 3. 04, 1 ♀ (A. Matessen); r. Karasu, Gorgan bay, 26. 4. 13, 1 ♀ (N. Solovkin); Serahs, Khorasan, 1. and 5. 8. 26, 6 ♀♀ (Semenov).

Previously recorded from Iran by Hoberlandt (1954, 1959, excl. specimen from Varamin), Seidenstücker (1958 — Shadegan in Khuzestan and Anbarabad in Kerman) and Kerzhner (1981).

***Aspilaspis viridula* (Spinola, 1837)**

Coll. NMP: NW Iran, Maku, 19.—20. 6. 70, 15 ♂♂, 19 ♀♀, 4 5th instar larvae (loc. no 25); N. Iran, Robate-Tork, 29. 8. 70, 2 ♀♀ (loc. no 34); C. Iran, Rafsanjan, 22. 3. 73, 13 ♂♂, 20 ♀♀ (loc. no 131); same locality, 26.—28. 4. 73, 1 ♀ (loc. no 181); E. Iran, env. Deh Pabid, 21. 4. 73, 1 ♂, 1 ♀ (loc. no 172); S. Iran, Komehr, 2000 m, 17. 6. 73, 1 ♂, 1 ♀, 2 5th instar larvae (loc. no 246); SW Iran, Shushtar, 13. 4. 77, 1 ♂, 2 ♀♀ (loc. no 287); E. Iran, 36 km N Konabad, 830 m, 7.—8. 6. 77, 2 ♂♂ (loc. no 361); NE Iran, 10 km W Sabzevar, 15.—16. 6. 77, 1 ♀ (loc. no. 368).

Coll. PIT: Gorgan, Moraveh-tapeh, 27. 7. 56, 1 ♂ (Safavi).

Coll. ZIN: Niazabad, N of Namaksar lake, Khorasan, 16. 4. 98, 1 ♂, 1 ♀; Tamin near Kuh-e Taftan, E. Kerman, 23.—24. 8. 98, 1 ♂; Bandar-e Gez, 24. 9. 03, 1 ♀ (Zarudny); mouth of the r. Karasu, Gorgan bay, 27. 5., 12.—27. 7. 14, 15 ♂♂, 13 ♀♀ (Kiritshenko).

Previously recorded from Iran (as *Nabis viridulus* Spin. and *N. viridis* Brullé) by Jakovlev (1877 — „N. Persien“), Seidenstücker (1957 — Iranshahr in Baluchestan; 1958 — Anbarabad in Kerman) and Kerzhner (1981). Kiritshenko's (1966) record from Zahedan belongs to *A. pallida*, and Seidenstücker's records may belong at least partly to *A. pallida* or *A. indica*.

***Aspilaspis pallida* (Fieber, 1861)**

Coll. NMP: NE Iran, Hesar, 50 km ESE Nishabur, 1400, 12.—13. 6. 77, 1 ♂, 1 5th instar larva (loc. no 364); Kuh-e Binolud, S slope, 15 km NE Nishabur, 1600—2300 m, 13.—15. 6. 77, 1 ♂ (loc. no 365).

Coll. ZIN: Neizar, NW Sistan, 14. 9. 98, 1 ♂ (Zarudny); Zahedan, Baluchestan, 5. 6. 55, 1 ♀ (Steinberg).

Previously recorded from Iran by Kerzhner (1981) but with some doubts raised about the correctness of the label of the only examined

male in the coll. ZIN. New finds confirm the distribution of this species in eastern part of Iran.

***Aspilaspis indica* (Stål, 1873)**

Coll. NMP: S. Iran, Aliabad, 75 km NW Jahrom, 10. 7. 70, 1 ♀ (loc. no 53); SE Iran, Rask, vall. r. Sarbáz, 3.—4. 4. 73, 2 ♂♂, 1 ♀ (loc. no 146); Bahu-kalat, 3.—4. 4. 73, 4 ♂♂, 9 ♀♀, 1 4th instar larva (loc. no 147); 25 km W Ghasre-ghand, 9.—10. 4. 73, 1 ♀ (loc. no 153); Ghasemabad, 10 km E Bampur, 11.—12. 4. 73, 2 ♂♂, 1 ♀, 1 5th instar larva (loc. no 157); E. Iran, Dowlatabad, 8.—9. 5. 73, 1 ♂ (loc. no 192); S. Iran, 7 km W Kahkom, 27.—28. 5. 73, 1 ♂, 1 ♀ (loc. no 215); SW Iran, 34 km SE Omidiyeh, 16.—17. 4. 77, 1 ♀ 1 4th instar larva (loc. no 292); S. Iran, Ahram, 45 km ESE Bushehr, 19.—20. 4. 77, 1 ♂, 1 ♀ (loc. no 301); Issin, 28. 4.—6. 5. 77, 1 ♂ (loc. no 320); Hassan Langi, 9.—10. 5. 77, 1 ♀ (loc. no 324); 43 km N Kahnuj, 540 m, 16.—17. 5. 77, 1 ♀ (loc. no 334); E. Iran, Kuh-e Khvajeh, 3.—5. 6. 77, 1 ♀ (loc. no 357).

Coll. ZIN: Bendan near Neizar, Sistan (now SE Khorasan), 28. 9. 98, 1 ♂ (Zarudny).

Previously recorded from Iran by Kerzhner (1981).

The following is the variability of apical hooks of aedeagus in Iran specimens: 3 separate hooks — in males from Rask and Bahu-Kalat; 3 hooks but the 2 basal are fused — in males from Ghasemabad, Kahkom and Issin; 3 hooks but the 2 apical are fused — in male from Bendan; only 2 hooks — in males from Dowlatabad and Ahram.

***Nabis palifer* Seidenstücker, 1954**

Coll. NMP: S. Iran, Estahbanat, 8.—9. 7. 70, 1 ♂, 1 ♀ (loc. no 49); N. Iran, C. Elburz, Kuhha-ye Tu-Chal, 200—2500 m, 18.—19. 7. 70, 1 ♂, (loc. no 59); Tehran-Evin, Elburz, 1700—2000 m, 9.—10. 3. 73, 3 ♂♂, 1 ♀ (loc. no 123); E. Iran, Mohammadabad, 3.—5. 5. 73, 1 ♀ (loc. no 187); Dowlatabad, 8.—9. 5. 73, 9 ♂♂, 2 ♀♀ (loc. no 192); 24 km SSW Hadjia-bad, 9.—10. 5. 73, 1 ♂, 1 ♀ (loc. no 194); S. Iran, 7 km W Kahkom, 27.—28. 5. 73, 2 ♂♂ (loc. no 215); Bezan, 15 km NW Furk, 1000—1400 m, 28.—29. 5. 73, (loc. no 218); Mian Jangal, 30. 5.—5. 6. 73, 2 ♂♂, 2 ♀♀ (loc. no 223); Naghshé Rostam, 20.—21. 6. 73, 8 ♂♂, 11 ♀♀ (loc. no 250); SW Iran, Pol-e Tang, 60 km NW Andimeshk, 10.—11. 4. 77, 1 ♀ (loc. no 284); S. Iran, Konardan, 36 km E Gav Band, 23.—24. 4. 77, 1 ♀ (loc. no 309); 6 km W Geno, 400 m, 7.—9. 5. 77, 1 ♀ (loc. no 323); C. Iran, 30 km N Sabzevaran 1650 m, 17.—19. 5. 77, 9 ♂♂, 11 ♀♀ (loc. no 337); 16 km W Sabzevaran, 820 m, 19.—20. 5. 77, 2 ♀♀ (loc. no 338); Ghashmeh-ye Sargaz, 1650 m, 20.—21. 5. 77, 1 ♀ (loc. no 339); Posht-e Kuh, 50 km NW Dowlatabad, 1700 m, 21.—22. 5. 77, 3 ♂♂ (loc. no 343); E. Iran, 36 km N Gonabad, 830 m, 7.—8. 6. 77, 72 ♂♂, 30 ♀♀ (loc. no 361); NE Iran, 10 km W Sabzevar, 15.—16. 6. 77, 11 ♂♂, 5 ♀♀ (loc. no 368); Rishi, 20 km SE Esfarain, 1350 m, 16.—17. 6. 77, 4 ♂♂ (loc. no 372); N. Iran, 3 km N Dasht, Golestan forest, 960 m, 18.—19. 6. 77, 1 ♂ (loc. no 375); 20 km NW Dasht,

Golestan forest, 530 m, 19.—21. 6. 77, 4 ♂♂, 2 ♀♀ (loc. no 376); env. Gorgan, Nahar Khouuran, 22. 6. 77, 1 ♂ (loc. no 377); 8 km NE Ziaran, 2400 m, 10.—16. 7. 77, 5 ♂♂, 5 ♀♀ (loc. no 400). Also collected in Turkey: S. Anatolia, Erdemli, 24.—26. 8. 70, 2 ♀♀ (loc. no 109).

Coll. PIT: Tehran-Evin, 8. 5.—16. 7. 71, 4 ♀♀ (L. T.).

Coll. KL: Golhak bei Tehran, 1400 m, Jun.—Aug. 61, 1 ♂.

Coll. USNM: Khorasan, 5 km E Bojnurd, 1.—3. 5. 63, 1 ♀; Mazandaran, 25 km W Gorgan, 10.—13. 6. 63, 1 ♂; Tehran, 36 km W Firuzkooh, 23.—26. 6. 63, 1 ♀ (L. H. Herman).

Coll. ZIN: Nusretabad, Sistan, 30. 10. 00, 1 ♂; Kyariz-e Nou and Kalendarabad, Khorasan, 5.—6. 8. 01, 1 ♂ (Zarudny); Shiraz, Fars, 23.—28. 5. 27, 1 ♂, 1 ♀; Tadjrish near Tehran, 12.—25. 6. 27, 4 ♂♂, 3 ♀♀; Keredj near Tehran, 26.—30. 6. 27, 1 ♀ (Siazov); 25 km SE Jahrom, Fars, 15. 7. 55, 1 ♀ (Steinberg).

Previously recorded from Iran by Kerzhner (1963, 1981).

***Nabis pseudoferus* Remane, 1949**

The territory of Iran is inhabited by two subspecies, by populations intermediate between them and by populations forming transition to the nominate subspecies.

N. p. pseudoferus x *N. p. orientarius*

Coll. NMP: NW Iran, Maku, 19.—20. 6. 70, 7 ♂♂, 10 ♀♀ (loc. no 25); 20 km SE Marand, 5.—6. 7. 73, 1 ♂, 4 ♀♀ (loc. no 266).

Coll. ZIN: NW Iran, east slope of Bagrovdag, 7. 7. 14, 1 ♀ (von Wick).

In 4 males from Maku parameres are smaller and aedeagus is with two hooks (as in *N. p. orientarius*), in two of these males the smaller hook is placed in uninflated penis to the left of the larger hook and in two males to the right of him. In 3 males from Maku parameres are slightly larger and aedeagus is with one large hook (as in *N. p. pseudoferus*), but a very small rudiment of the second hook is present. In all females from Maku (fig. 1—6) vagina is symmetrical (in difference from *N. p. pseudoferus*), as a rule with unsclerotized walls and with straight hind margin (as in *N. p. orientarius*), rarely with partly sclerotized dorsal wall or with prominent hind margin (as in *N. p. transcaspicus*). In some females vagina is with two separate parietal glands (as in *N. p. orientarius*), in some with one (as in *N. p. pseudoferus* and *N. p. transcaspicus*), and in some we find intermediate condition (one gland constricted in the middle, two glands contacting with their inner sides or joined by a sclerotized band). In the female from Bagrovdag the vagina is of the same form as in *N. p. transcaspicus* but not sclerotized. In the male from Marand genitalia are as in *N. p. orientarius*, in two females vagina is as in *N. p. transcaspicus* but not sclerotized, in two females vagina is as in *N. p. orientarius* but a connecting sclerotized bridge or a very small third gland between the two principal glands is present. It is interesting that populations from NW Iran are more or less inter-

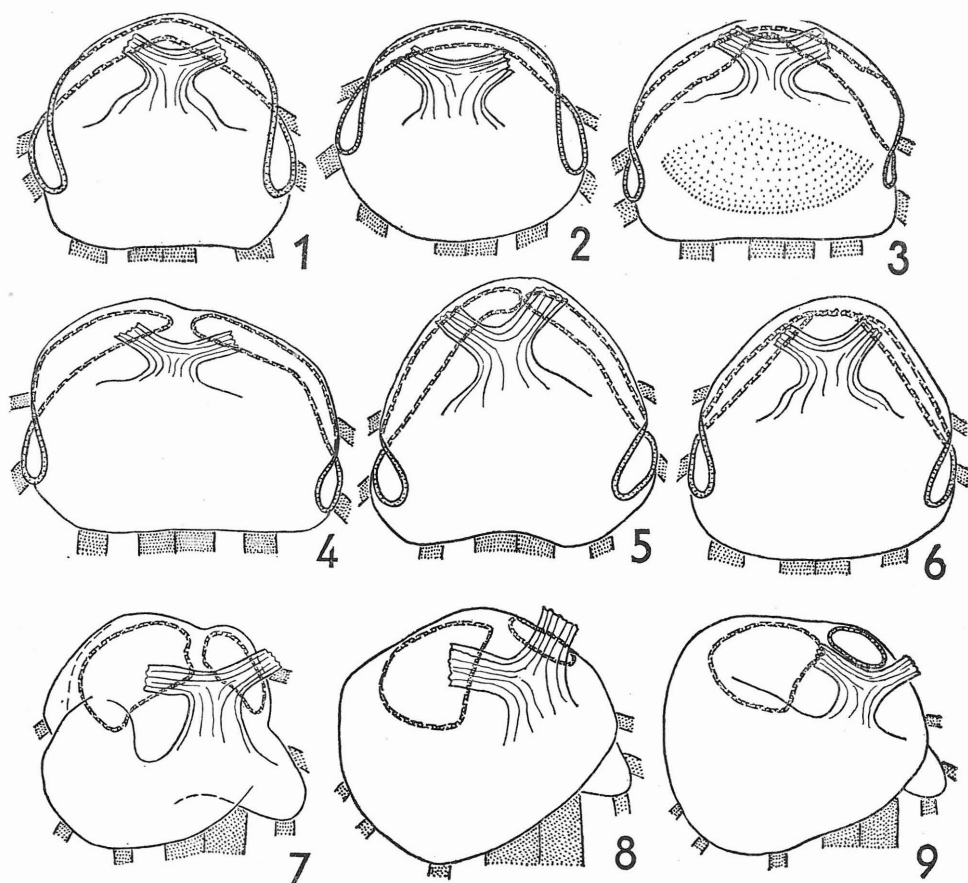


Fig. 1—9. *Nabis*, vagina from above. 1—6: *N. pseudoferus* from Maku; 7—9: *N. punctatus* from Tabriz (7), env. of Tehran (8), and Kerman (9).

mediate not only between *N. p. pseudoferus* and *N. p. orientarius* but shaws also some resemblance to *N. p. transcaspicus*.

N. p. orientarius Remane, 1962

Coll. NMP: W. Iran, Eskandari, 2000 m, 1. 7. 70, 1 ♂ (loc. no 36); Organ, 2000 m, 1. 7. 70, 1 ♀ (loc. no 37); Zayandeh Rud, 50 km W Kuhrang, 2200 m, 1. 7. 70, 2 ♀♀ (loc. no 38); C. Iran, Rafsanjan, 26.—28. 4. 73, 2 ♀♀ (loc. no 181); E. Iran, Korsiash, 29.—30. 5. 73, 1 ♀ (loc. no 220); 28 km N Masiri, 1650 m, 12. 6. 73, 1 ♂ (loc. no 236); 48 km N Masiri, 2230 m, 12. 6. 73, 1 ♂ (loc. no 238); Sisakht Dena, 2500—3000 m, 13.—14. 6. 73, 1 ♀ (loc. no 241); 29 km E Yasuj, 2300 m, 16.—17. 6. 73, 1 ♂, 4 ♀♀ (loc. no 245). Also collected in Turkey: C. Anatolia, Darende, 1250 m,

16. 6. 70, 1 ♀ (loc. no 11); Balaban, 16. 6. 70, 1 ♀ (loc. no 12); NE Anatolia, Tahir, 2400 m, 18. 6. 70, 1 ♀ (loc. no 21); W. Anatolia, 12 km NE Kütahya, 14.—15. 7. 73, 1 ♀.

Coll. USNM: Khaji Arab, 100 M. W Tehran, 10.—20. 9. 62, 1 ♀ (W. A. Dummitt).

Coll. ZIN: Hebrabad, Irak-Adjemi, 27. 4. 04, 1 ♂ (Zarudny); Tabriz, 5. 5., 2. 6., 3. 7. 14, 5 ♂♂, including paratype, 6 ♀♀; Heidarabad, SW shore of the lake Urmia, 12. 5. 16, 1 ♀ (Andrievskiy); Shiraz, Fars, 23.—28. 5. 27, 1 ♀; Tadjrish near Tehran, 20.—25. 6. 27, 2 ♀♀; Keredj near Tehran, 26.—30. 6. 27, 1 ♂, paratype (Siazov); Jiroft, 200 km SE Kerman, 11. 5. 55, 1 ♂; 25 km SE Jahrom, Fars, 15. 7. 55, 1 ♂, 1 ♀ (Steinberg).

Previously recorded from Iran by Remane (1962), Kiritshenko (1966) and Kerzhner (1981).

N. p. orientarius x *N. p. transcaspicus*

Coll. NMP: N. Iran, C. Elburz, Gazanak, Haraz Chay, 1400 m, 20.—27. 7. 70, 1 ♂, 2 ♀♀ (loc. no 63).

Coll. KL: Prov. Chuillan, Lahijan am Kasp. Meer, 200 m, 31. 8. 61, 1 ♀; Now-Shahr am Kasp. Meer, Jul.—Sept. 61, 1 ♂.

In the female from Lahijan vagina is as in *N. p. transcaspicus* but less sclerotized and with parietal gland somewhat narrowed in the middle. In the male from Now-Shahr paramere is as in *N. p. transcaspicus* but aedeagus as in *N. p. orientarius*. The male from Gazanak is intermediate in the form of aedeagus hooks between the two subspecies; in one female from Gazanak vagina is as in *N. p. orientarius*, but with one parietal gland constricted in the middle; in the second female vagina is as in *N. p. transcaspicus*, but not sclerotized.

N. p. transcaspicus Remane, 1962

Coll. NMP: N. Iran, Babol — Shahi, 24. 7. 70, 1 ♂, 1 ♀ (loc. no 70); Shahi, 24. 7. 70, 1 ♂ (loc. no 71); Behshahr, 25. 7. 70, 1 ♂ (loc. no 72); Minudasht, 27. 7. 70, 1 ♀ (loc. no 76); Wildlife Park, vicinity of Dasht, 650 m, 27.—30. 7. 70, 8 ♂♂, 13 ♀♀, 3 larv. (loc. no 77); Bandar-e Shah, 1. 8. 70, 2 ♀♀ (loc. no 79); 3 km N Dasht, Golestan forest, 960 m, 18.—19. 6. 77, 1 ♂ (loc. no 375); 10 km S Behshahr, 480 m, 23.—24. 6. 77, 1 ♀ (loc. no 380); 6 km E Zibar, 24.—26. 6. 77, 1 ♂, 2 ♀♀ (loc. no 382).

Coll. PIT: Behshahr, 3. 10. 46, 1 ♂ (Taghi-Zadeh); Khorassan, Shahroud — Shahkuh, 2150 m, 15. 6. 74, 1 ♀ (Radjabi, Pazouki).

Coll. USNM: Mazandaran, 25 km E Gorgan, 27.—29. 5. 63, 3 ♂♂, 1 ♀; 80 km NNE Gorgan, 5.—9. 6. 63, 2 ♀♀; 25 km W. Gorgan, 10.—13. 6. 63, 5 ♂♂, 12 ♀♀; 20 km W Mahmudabad, 20.—21. 6. 63, 1 ♂, 1 ♀ (L. H. Herman).

Coll. ZIN: Astrabad (now Gorgan), 13. 4. 04, 1 ♀ (Filippovitsh); same locality, March and 13. 4.—2. 5. 14, 3 ♂♂, 14 ♀♀; Kuzluk, 4346 ft, 9. 5. 14, 1 ♂, 1 ♀; mouth of the r. Karasu, Gorgan bay, 27. 5., 26.—27. 7. 14, 2 ♂♂, 4 ♀♀; Shahrud, 28. 5.—5. 6. 14, 13 ♂♂, including paratype, 9 ♀♀; Shahkuh-superior, 18.—20. 6. 14, 1 ♂, 5 ♀♀ (Kiritshenko).

Previously recorded from Iran by Remane (1962) and Kerzhner (1981).

Nabis punctatus A. Costa, 1847

Coll. NMP: NW Iran, Maku, 19.—20. 6. 70, 2 ♂♂, 5 ♀♀ (loc. no 25); Marand, 20. 6. 70, 1 ♂ (loc. no 26); Sufian, 30 km W Tabriz, 20.—21. 6. 70, 3 ♂♂, 1 ♀ (loc. no 27); Qazvin, 24. 6. 70, 1 ♀ (loc. no 29); W. Iran, Organ, 2000 m, 1. 7. 70, 2 ♀♀ (loc. no 37); Zayandeh Rud, 50 km W Kuhrang, 2200 m, 1. 7. 70, 7 ♂♂, 2 ♀♀ (loc. no 38); SW Iran, Kazerun, 5.—6. 7. 70, 1 ♂ (loc. no 45); N. Iran, C. Elburz, Gazanak, Horaz Chay, 1400 m, 20.—21. 7. 70, 6 ♀♀ (loc. no 63); E. Elburz, Eyn Varzan, 2000 m, 2.—3. 8. 70, 1 ♀ (loc. no 83); NW Iran, 23 km SW Marand, 17. 8. 70, 1 ♂ (loc. no 97); E. Iran, Bam, 24.—25. 4. 73, 1 ♂, 1 ♀ (loc. no 177); Deh Bakri, 1700—1750 m, 30. 4.—3. 5. 73, 1 ♀ (loc. no 186); S. Iran, 15 km NW Mian Jangar, 5. 6. 73, 1 ♀ (loc. no 224); Kushk, N Masiri, 1800 m, 12. 6. 73, 1 ♂ (loc. no 237); Zagros, Sisakht, 2400 m, 13.—15. 6. 73, 1 ♂ (loc. no 240); Zagros, Yasuj, 16. 6. 73, 1 ♂ (loc. no 243); Shiraz, 19. 6. 73, 1 ♀ (loc. no 249); Nagshché Rostam, 20.—21. 6. 73, 3 ♂♂, 1 ♀ (loc. no 250); N. Iran, Robate-Tork, 24.—25. 6. 73, 2 ♂♂, 5 ♀♀ (loc. no 258); NW Iran, 20 km SE Marand, 5.—6. 7. 73, 2 ♀♀ (loc. no 266); W. Iran, 42 km W Arak, 8. 4. 77, 1 ♂ (loc. no 281); C. Iran, Ferdows-e Esfandagheh, 21. 5. 77, 1 ♀ (loc. no 340); NE Iran, Rishi, 20 km SE Esfarain, 1350 m, 16.—17. 6. 77, 1 ♂ (loc. no 372); N. Iran, 20 km NW Dasht, Golestan forest, 530 m, 19.—21. 6. 77, 1 ♂, 3 ♀♀ (loc. no 376); 8 km NE Ziarn, 2400 m, 10.—16. 7. 77, 5 ♂♂, 4 ♀♀ (loc. no 400). Also collected in Turkey: C. Anatolia, Gülşehir, 15. 6. 70, 1 ♂ (loc. no 5).

Coll. PIT: Varamin, Tehran prov., May 1943, 1 ♀ (Damavand), misidentified as *Halonabis sareptanus* by Hoberlandt (1959); Tehran-Evin, 17. 6. 71, 1 ♀ (L. T.).

Coll. KL: Golhak bei Tehran, 1400 m, 18. 8. 61, 14 ♂♂, 9 ♀♀; Prov. Ghuillan, Lahijan am Kasp. Meer, 200 m, Jul.—Aug. 61, 1 ♀.

Coll. USNM: Haji Arab, 100 M. W Tehran, 10.—20. 6. 62, 2 ♀♀ (W. A. Dummitt).

Coll. ZIN: from Zirkuh to Turbet Heidari, Khorasan, 15.—21. 10. 98, 1 ♂, 1 ♀; from Bazhouzpain to Meshhed, Khorasan, 9.—10. 8. 01, 1 ♂, 1 ♀; Bandar-e Gez, Mazandaran, 16.—17. 10. 03, 1 ♀ (Zarudny); Shah-Abdul-Azim near Tehran, 11. 3. 04, 1 ♀ (A. Matessen); Tabriz, 5. 5., 27. 6. and 5.—6. 7. 14, 3 ♂♂, 2 ♀♀ (Andrievskiy); Shahrud, 17. 5.—6. 6. 14, 1 ♂, 9 ♀♀; Shahkuh-pain, 5. 7. 14, 1 ♂ (Kiritshenko); Shiraz, Fars, 23.—28. 5. 27, 3 ♂♂, 1 ♀; Tadjrish near Tehran, 12.—25. 6. 27, 22 ♂♂, 9 ♀♀; Keredj near Tehran, 26.—30. 6. 27, 1 ♂; Kerman, end of October 1927, 30. 5. 28, 10 ♂♂, 15 ♀♀ (Siazov); Kerman, November 1927, 1 ♂, 3 ♀♀ (V. Kuznetsov).

Iran specimens differ from european *N. p. punctatus*. They are relatively large and wide, light coloured (longitudinal medial dark stripe at head, pronotum and often also at scutellum light brown or even absent, hemelytra as a rule without brown spots at base of hairs) and with some differences in the form and position of parietal glands in the female vagina (they are more differing in size, their inner sides are not parallel, and the smaller gland is often stifted to the margin or even to

the dorsal side of vagina). These differences increase to south and east (fig. 7—9). Male genitalia are identical to these of *N. p. punctatus*.

***Nabis capsiformis* Germar, 1838**

Coll. NMP: S. Iran, Estahbanat, 8.—9. 7. 70, 1 ♂ (loc. no 49); SE Iran, Sekand, 27 km ENE Sarbáz, 31. 3.—1. 4. 73, 1 ♂, 1 ♀ (loc. no 144); Rask, vall. r. Sarbáz, 3.—4. 4. 73, 1 ♂, 1 ♀ (loc. no 146); Tis, 6.—7. 4. 73, 3 ♂♂, 3 ♀♀ (loc. no 150); 55—78 km NNW Tis, Pish mant Kowr riv., 8. 4. 73, 1 ♀ (loc. no 151); E. Iran, Taftan, Tamandan, 2100 m, 20. 4. 73, 1 ♀ (loc. no 167); Rafsanjan, 26.—28. 4. 73, 1 ♂, 2 ♀♀ (loc. no 181); Mohammadabad, 1600 m, 3.—5. 5. 73, 1 ♂, 1 ♀ (loc. no 187); 33 km W Sabzevaran, 1100 m, 6.—7. 7. 73, 1 ♀ (loc. no 189); S. Iran, Issin, 11.—15. 5. 73, 1 ♂ (loc. no 198); Hassan Langi, 16.—17. 5. 73, 1 ♀ (loc. no 200); 16 km N Jask, 22.—23. 5. 73, 1 ♀ (loc. no 208); 28 km N Masiri, 1650 m, 12. 6. 73, 1 ♂, 2 ♀♀ (loc. no 236); Sisakht Dena, 2500—3000 m, 13.—14. 6. 73, 1 ♂ (loc. no 241); 29 km E Yasuj, 2300 m, 16.—17. 6. 73, 9 ♂♂, 4 ♀♀ (loc. no 245); Naghshé Rostam, 20.—21. 6. 73, 1 ♂ (loc. no 250); SW Iran, Pol-e Tang, 60 km NW Andimeshk, 10.—11. 4. 77, 1 ♂ (loc. no 284); Hoseiniyeh, 28 km NNW Andimeshk, 360 m, 12.—13. 4. 77, 1 ♂ (loc. no 286); Shushtar, 13. 4. 77, 1 ♂ (loc. no 287); S. Iran, Ahram, 45 km ESE Bushehr, 19.—20. 4. 77, 1 ♂ (loc. no 301); Issin, 28. 4.—6. 5. 77, 3 ♂♂, 3 ♀♀ (loc. no 320); C. Iran, Chashmeh-ye Sargaz, 1650 m, 20.—21. 5. 77, 2 ♂♂ (loc. no 339); Post-e Kuh, 50 km NW Dowlatabad, 1700 m, 21.—22. 5. 77, 1 ♀ (loc. no 343); Gowk, 31. 5. 77, 1 ♀ (loc. no 352); Shahdad, 570 m, 31. 5.—1. 6. 77, 1 ♂ (loc. no 353); N. Iran, env. Gorgan, Nahar Khouuran, 22. 6. 77, 1 ♂ (loc. no 377).

Coll. KL: Golhak bei Tehran, 1400 m, Jun.—Aug. 61, 1 ♂.

Coll. PIT: Berang, Sistan, 16. 5. 50, 1 ♀ (Mirzayan).

Coll. USNM: Kordestan, 66 km NNW of Sanandadj, 23.—24. 5. 65, 1 ♀; W. Azarbaijan, 32 km NNW of Sardasht, 1.—2. 6. 65, 1 ♀ (J. W. Neal).

Coll. ZIN: Sultan Suleiman, E. Khorasan, 10. 7. 96, 1 ♀; locality Balu, region Bagu, Makran, 4. 3. 01, 1 ♂; Mahomerra, r. Karun, 1.—4. 2. 04, 1 ♀; Nasrie and Ahvaz, r. Karun, 19.—26. 2. 04, 2 ♂♂, 2 ♀♀; locality Pain Gyach, Arabistan, 25. 3. 04, 2 ♂♂, 2 ♀♀; Alhorshir, Lurestan, 30. 3. 04, 1 ♀ (Zarudny); Tadjrish near Tehran, 12.—25. 6. 27, 1 ♂; Kerman, 30. 5. 28, 8 ♂♂, 10 ♀♀ (Siazov); Jiroft, 200 km S Kerman, 11. 5. 55, 1 ♀; 115 km on the road from Zahedan to Hash, Baluchestan, 1500 m, 18. 5. 55, 1 ♂; 20 km on the road from Iranshahr to Bampur, 22. 5. 55, 3 ♂♂; Bampur, 23. 5. 55, 1 ♀; Zahedan, Baluchestan, 28. 5. 55, 2 ♂♂, 2 larvae; 25 km SE Jahrom, Fars, 15. 7. 55, 1 ♂ (Steinberg).

Previously recorded from Iran by Hoberlandt (1954), Seidenstücker (1957, 1958), Wagner (1961), Kiritschenko (1966) and Kerzhner (1981).

Prostemma guttula asiaticum Kerzhner, 1968

Coll. ZIN: Sarhun, Arabistan, 8. 4. 04, 1 ♀, paratype (Zarudny); Tadjikistan near Tehran, 12.—25. 6. 27, 1 ♀, 1 larva, paratypes (Siazov).

Previously recorded from Iran by Kerzhner (1968, 1981).

Prostemma sanguineum (Rossi, 1790)

Coll. ZIN: r. Karasu, Gorgan bay, 18. 2. 04, 1 ♂ (Filippovitsh); Astrabad (now Gorgan), 4.—24. 4. 14, 2 ♂♂, 3 ♀♀; mouth of the r. Karasu, 27. 5. and 21. 7. 14, 2 ♀♀ (Kiritshenko).

Previously recorded from Iran by Wagner (1961, as *P. afghanicum* Popp., region of Akinlou in Kurdistan) and Kerzhner (1981).

Alloeorhynchus flavipes (Fieber, 1836)

Coll. ZIN: Astrabad (now Gorgan), 14.—15. 4. 14, 2 ♀♀ (Kiritshenko).

Previously recorded from Iran by Kerzhner (1981).

References

- Hoberlandt L., 1954: Hemiptera-Heteroptera from Iran, I. *Acta ent. Mus. Nat. Pragae*, **29**: 121—148.
- Hoberlandt L., 1959: Hemiptera-Heteroptera from Iran, II. *Acta ent. Mus. Nat. Pragae*, **33**: 497—523.
- Hoberlandt L., 1974: Results of the Czechoslovak-Iranian entomological expedition to Iran 1970. No. 1: Introduction. *Acta ent. Mus. Nat. Pragae, suppl.* **6**: 9—20.
- Hoberlandt L., 1981: Results of the Czechoslovak-Iranian entomological expeditions to Iran. Introduction to the second expedition 1973. *Acta ent. Mus. Nat. Pragae*, **40**: 5—32.
- Hoberlandt L., 1983: Results of the Czechoslovak-Iranian entomological expeditions to Iran. Introduction to the Third expedition 1977. *Acta ent. Mus. Nat. Pragae*, **41**: 5—24.
- Jakovlev B., 1877: Hemiptera-Heteroptera from North Persia. *Trudy Russ. ent. Obshch.* **10** (2): 67—98. (In Russian).
- Kerzhner I. M., 1963: Beitrag zur Kenntnis der Unterfamilie Nabinae (Heteroptera, Nabidae). *Acta ent. Mus. Nat. Pragae*, **35**: 5—61.
- Kerzhner I. M., 1968: New and little known palaearctic bugs of the family Nabidae (Heteroptera). *Ent. Obozr.* **47** (4): 848—863. (In Russian).
- Kerzhner I. M., 1981: Poluzhestkokrylye semeystva Nabidae. Fauna SSSR. Nasekomye khobotnye, 13, 2. Leningrad. 326 p. (In Russian).
- Kerzhner I. M. and Rieger, Ch., 1985: Wanzen aus Iran (Insecta: Heteroptera). *Senckenbergiana biol.* **66** (1/3): 51—53.
- Kiritshenko A. N., 1949: Hemiptera-Heteroptera collected by academician E. N. Pavlovsky in Iran in 1942. *Trudy Zool. Inst. Akad. Nauk SSSR*, **8** (4): 879—887.
- Kiritshenko A. N., 1966: Hemiptera-Heteroptera collected by D. M. Steinberg in Iran in 1955. *Ent. Obozr.* **45** (4): 798—805. (In Russian).
- Lindberg H., 1938: Einige Heteropterenfunde aus Nord-Persien. *Notulae ent.* **18**: 88—91.
- Miyamoto S., 1963: Heteropterous Insects from Iran and Afghanistan. In: Results of the Kyoto University Scientific Expedition to Karakorum and Hindukush, 1955. Vol. 4. Insect fauna of Afghanistan and Hindukush: 89—92.
- Remane R., 1962: Zur Kenntnis der Gattung Nabis Latr. (Hem. Het. Nabidae). *Mem. Soc. ent. Ital.* **41**: 5—14.
- Seidenstücker G., 1957: Heteropteren aus Iran 1954. I. Teil Hemiptera-Heteroptera (ohne Fam. Miridae). *Jh. Ver. vaterl. Naturk. Württemberg*, **112** (1): 65—73.

- Seidenstücker G., 1958: Heteropteren aus Iran 1956 (ohne Familie Miridae). *Stuttgart. Beitr. Naturk.* **11**: 1—5.
- Wagner E., 1961: Beitrag zur Heteropteren-Fauna von Iran. Ergebnisse der Österreichischen Iran-Expeditionen 1949/50 und 1956. *Anz. math.-naturw. Kl. Österr. Akad. Wiss.* **1961**, Nr 10: 1—8.
- Zarudny N., 1899: Itinéraire de Mr. N. Zarudny dans la Perse orientale en 1893. *Ezhegodn. Zool. Mus. Imp. Akad. Nauk*, **1**: V—XII. [In Russian].
- Zarudny N., 1902: Itinéraire de l'expédition de la Société Impériale Russe de Géographie dans la Perse orientale, en 1900—1901. *Ezhegodn. Zool. Mus. Imp. Akad. Nauk*, **7**: I—IX. [In Russian].
- Zarudny N., 1905: Itinéraire de l'expédition dans la Perse occidentale en 1903—1904. *Ezhegodn. Zool. Mus. Imp. Akad. Nauk*, **9**: XIV—LI. [In Russian].