

Review of the genus *Palmallorcus* Gnezdilov with description of a new species from Spain (Homoptera, Fulgoroidea: Issidae)

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Barbarissus Gnezdilov, 2003 is placed in synonymy under *Palmallorcus* Gnezdilov, 2003. *Palmallorcus biemani* sp. n. is described from Spain. A key to species of the genus and data on their distribution are given.

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The material examined is deposited in the collection of Dr. K. den Bieman (Ulvenhout, The Netherlands) (CKDM), at Museum of Natural History Naturalis (Leiden, The Netherlands) (RMNH), and at Zoological Institute, Russian Academy of Sciences (St.Petersburg, Russia) (ZIN).

Genus *Palmallorcus* Gnezdilov, 2003

Palmallorcus Gnezdilov, 2003: 41. Type species: *Hysteropterum balearicum* Dlabola, 1982.

Barbarissus Gnezdilov, 2003: 43, **syn. n.** Type species: *Issus punctulatus* Rambur, 1840.

Gnezdilov (2003) erected two monotypic genera, *Palmallorcus* for *Hysteropterum balearicum* Dlabola, 1982 and *Barbarissus* for *Issus punctulatus* Rambur, 1840. The recent studies by the author have shown that these generic names are synonymous. Also *Hysteropterum nevadense* Linnavuori, 1957 was transferred to the genus *Palmallorcus* (Gnezdilov, 2004). Examination of material from Spain revealed in eastern and northeastern Spain a new *Palmallorcus* species closely related to *P. balearicus*. Both species have similar distribution ranges. Currently, the genus *Palmallorcus* comprises 4 species distributed in Spain, Portugal, Morocco, and Cyprus.

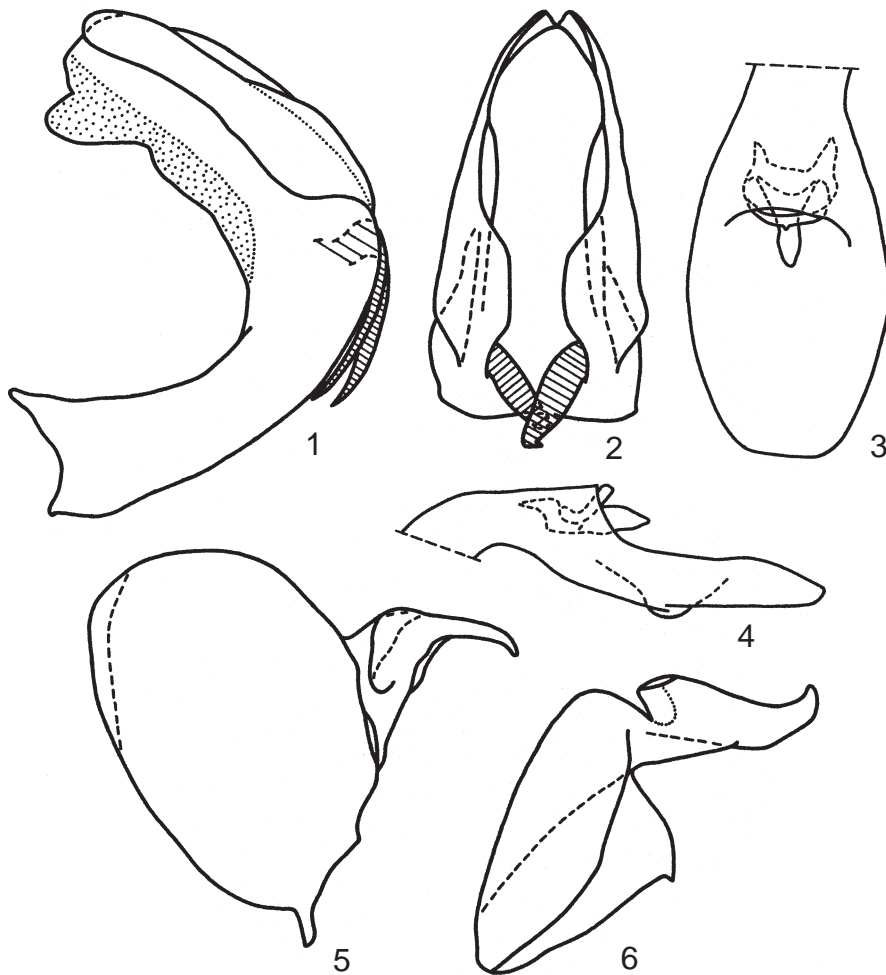
Palmallorcus biemani sp. n. (Figs 1-6)

Holotype (ZIN). ♂, **Spain**, *Tarragona Prov.*, 3 km NE of Horta de San Juan, 470 m, 3.VIII.1997, leg. K. den Bieman.

Paratypes (ZIN, CKDM). **Spain**: *Tarragona Prov.*: 2 ♂, 2 ♀, 3 km NE of Horta de San Juan, 470 m, 3.VIII.1997;

1 ♂, same locality, 26.VII.1999; 2 ♂, same locality, 3.VIII.2000; 4 ♂, 3 ♀, same locality, 18.VII.2001; 1 ♀, 2 km NE of Horta de San Juan, 430 m, 5.VIII.1997; 2 ♂, 1 ♀, 4 km W of Cherta, 5.VIII.1997; 1 ♂, 10 km NW of Cherta, 380 m, 3.VIII.1997; 1 ♂, L'Ametlla de Mar, 28.VII.1997; 2 ♂, 1 ♀, 8 km NNE of L'Ametlla de Mar, 16.VII.2001; 1 ♂, 1 ♀, same locality, 28.VII.1997; 1 ♂, Los Puertos to Roquetes, 400 m, 1.VIII.1997; 1 ♂, 3 km NE of La Ampolla, 18.VII.1999; 1 ♀, 11 km NNE of Gandesa, 560-580 m, 23.VII.2001; 3 ♂, 4 ♀, Alfara de Carles, 340 m, 1.VIII.1997; 1 ♂, 2 ♀, 1 km S of Alfara de Carles, 460 m, 22.VII.1999; 1 ♂, 1 ♀, 6 km NW of El Perello, 230 m, 30.VII.1997; *Castellon Prov.*: 2 ♂, 16 km W of Alcala de Xivert (La Serratella), 750 m, 22.VIII.1998; 2 ♂, 3 ♀, 8 km N of Albocacer, Ermita de St. Miquel, 700 m, 9.VII.2001; 1 ♂, 1 ♀, 10 km N of Albocacer, 740 m, 13.VII.1999; 1 ♂, 1 ♀, 3 km S of Fredes, 980-1040 m, 20.VII.2001; 4 ♂, 1 ♀, same locality, 980-1020 m, 31.VII.2000; 1 ♂, 6 km SE of Fredes, 620-680 m, 20.VII.2001; 1 ♂, 1 ♀, 2 km S of St. Carles de Rapita, 30.VII.2000; 2 ♂, 1 ♀, 10 km NW of Benlloch, Col de la Bandareta, 830 m, 24.VIII.1998; 1 ♂, Altura, 800-820 m, 13.VII.1985; 1 ♀, 14 km NW of Adzeneta, Adzeneta del Maestrat, 1030-1070 m, 27.VIII.1998; 1 ♂, 16 km NW of Adzeneta, Adzeneta del Maestrat, 1030 m, 14.VII.1999; *Teruel Prov.*: 4 ♂, 1 ♀, 11 km NW of Benassal, 1000-1080 m, 11.VII.2001; 2 ♀, 5 km NE of Noqueruelas (Sierra de Gudar), 1570 m, 19.VII.1986; 1 ♂, 4 km E of La Puebla de Valvera, 1030 m, 17.VII.1986; 1 ♀, 1 km S of Mora de Rubielos, 17.VII.1986; *Huesca Prov.*: 1 ♂, 6 km S of Lanajo, 600-620 m, 21.VII.2002; *Zaragoza Prov.*: 1 ♂, 20 km SW of Bujaraloz, 22.VII.2002, all leg. K. den Bieman.

Description. Metope elongate, weakly enlarged to clypeus, with median keel reaching clypeus and sublateral keels reaching only middle of metope. Median and sublateral keels joining at apical margin of metope. Coryphe weakly concave, 1.6 times as broad as long, anterior margin strongly convex, posterior margin obtusely angulate. Pronotum with strongly convex anterior margin and straight posterior margin. Scutellum without keels. Fore wing nearly oval, with narrow hypo-



Figs 1-6. *Palmallorcus biemani* sp. n., male, holotype. 1, penis, lateral view; 2, same, ventral view; 3, anal tube, dorsal view; 4, same, lateral view; 5, stylus, lateral view; 6, same, dorsal view.

costal plate. Radius bi- or trifurcate. Mediana tri- or quadrifurcate. Cubitus anterior bifurcate. Hind wing rudimentary. Hind tibia with 2 lateral teeth. Metatarsomere I with 9 intermediate socle setae.

General coloration light yellowish brown, sometimes with dark brown cells of fore wings. Teeth and socle setae of legs and apices of metatarsomes III with claws dark brown. Abdominal tergites black. Gonoplasts and apex of female anal tube dark brown or black.

Male. Pygofer with convex hind margin. Anal tube elongate, narrowing basally and apically, apex truncate (dorsal view) (Fig. 3). Ventral surface of anal tube with a pair of hemispherical projections (Fig. 4) near its middle. Anal column narrow and short (0.2 times as long as anal tube).

Phallobase with weakly sclerotized dorsoapical surface. Dorsolateral phallobase lobes not narrowed to rounded apices. Each dorsolateral lobe with short, broad process (Fig. 1). Processes of both lobes form a collar around phallosome (Fig. 2). Ventral margin of each lobe turned inside above ventral aedeagal hook. Ventral phallobase lobe enlarged before apex, with apical notch. Aedeagus with long apical processes and short ventral hooks (0.25 times as long as phallobase) gradually narrowing apically. Stylus with strongly convex hind margin, caudodorsal angle widely rounded (Fig. 5). Capitulum of stylus narrow, narrowing apically (dorsal view), on short neck (Fig. 6). Lateral tooth of stylus in shape of wide plate; apical tooth distinct.

Female. Sternum VII with deeply concave hind margin. Anal tube elongate, weakly narrowing to blunt apex (dorsal view), convex (lateral view). Anal column long (0.3 times as long as anal tube) and wide. Gonoplasts with well sclerotized and pigmented furca and lateral fields. Gonocoxa VIII with keel-shaped transverse projection near the anterior connective lamina, which bears 5 teeth in lateral group (3 upper small teeth without keels and 2 lower large teeth with keels).

Body length: ♂ 3.4-3.9 mm, ♀ 3.9-4.3 mm.

Comparison. The species externally and in the structure of the male genitalia is closely related to *P. balearicus* (Dlabola, 1982), but distinguished by the shorter ventral aedeagal hooks and longer, not enlarged medially male anal tube with a pair of hemispherical projections ventrally and with lateral margins not turned down (Figs 1, 3, 4).

Etymology. The species name is derived from the surname of Dr. Kees den Bieman.

Distribution. Eastern and northeastern Spain.

***Palmallorcus balearicus* (Dlabola, 1982)**

New records (RMNH). **Spain, Altea Prov.:** 1 ♂, 1 ♀, La Jara near Denia, 14.IV.1982; 1 ♂, 10 km N of Benidorm, 18.IV.1982.

Distribution: eastern and northeastern Spain, Balearic Islands, and Cyprus (Dlabola, 1982; Gnezdilov et al., 2004).

***Palmallorcus punctulatus* (Rambur, 1840), comb. n.**

Issus punctulatus Rambur, 1840: 212.
Barbarissus punctulatus: Gnezdilov, 2003: 44.

New records. **Spain:** 1 ♂, *Malaga Prov.*, 4 km S of Torremolinos, 10-14.IV.1983, "E.I.S. UF 65", 0-50 m, near coast (RMNH). **Portugal:** *Algarve Prov.:* 6 ♂, 3 ♀, Barragem da Bravara, 8.IV.1996, K. den Bieman leg. (CDM and ZIN); 1 ♂, 3 km W of Sagres, 7.IV.1996, K. den Bieman leg. (CDM); 1 ♂, S. of Tavira, 1.V.2004, H. Nickel leg. (ZIN); 1 ♂, S. of Carrapateira, 22.IV.2004, H. Nickel leg. (ZIN).

Distribution: southern and southwestern Portugal, southern Spain, northern Morocco (Rambur, 1840; Gnezdilov, 2003; Gnezdilov et al., 2004).

***Palmallorcus nevadensis* (Linnavuori, 1957)**

New record (RMNH). **Spain, Jaén Prov.:** 1 ♂, Boven Las Correderas, 900 m, 25.V.1958.

Distribution: southern Spain (Linnavuori, 1957; Gnezdilov, 2004).

Key to *Palmallorcus* species

- 1(2). Each dorsolateral phallobase lobe with long and narrow subapical process . . . ***P. nevadensis*** (Linnavuori)
- 2(1). Each dorsolateral phallobase lobe with short and broad process forming a collar around phallobase (Figs 1, 2).
- 3(4). Coryphe broad (2-2.5 times as broad as long). Fore wing wide (1.5-1.6 times as long as wide medially). Ventral aedeagal hooks long (half as long as phallobase), reaching penis base. Stylus with weakly convex hind margin ***P. punctulatus*** (Rambur)
- 4(3). Coryphe longer (1.4-1.7 times as broad as long). Fore wing narrower (1.8 times as long as wide medially). Ventral aedeagal hooks short (0.25-0.33 times as long as phallobase), not reaching penis base. Stylus with strongly convex hind margin.
- 5(6). Ventral aedeagal hooks 0.33 times as long as phallobase. Male anal tube strongly enlarged medially (dorsal view), its lateral margins turned down (lateral view). Female anal tube broad (dorsal view). Female anal column short (0.2 times as long as anal tube) ***P. balearicus*** (Dlabola)
- 6(5). Ventral aedeagal hooks 0.25 times as long as phallobase (Fig. 1). Male anal tube not enlarged medially (dorsal view) (Fig. 3), its lateral margins not turned down (lateral view) (Fig. 4). Female anal tube elongate (dorsal view). Female anal column longer (0.3 times as long as anal tube) ***P. biemani*** sp. n.

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