

nae reaching two-fifths the length of costa, slender, with the club formed gradually, subcylindrical twice as thick as shaft, dorsally dark brown, ventrally orange brown. Thorax: dorsally and ventrally blackish brown, legs medium brown. Abdomen: dorsally blackish brown, ventrally dull brown. Wings: FW length: 26-27 mm (mean: 26.5 mm, n=16), apex subacute, outer margin straight from M1 to 1A. HW outer margin very slightly undulated. FWD uniform blackish brown, lustrous; androconial patch rectangular, large, entering discal cell; fringes alternately gray-brown and whitish. HWD uniform blackish brown, lustrous, hairy along anal margin, a small orange suffusion from along anal margin near tornus; fringes brown, with some whitish scales from apex to vein M3. FWV: dark brown, lustrous, a shade lighter in outer one-third; in some individuals a faint barely noticeable postdiscal streak made of sparse milky white scales, gradually narrowing from costa to vein M2; apical area suffused with fine whitish scales. HWV: dark brown, slightly darker than on the FW; a narrow mid costal pale yellow streak extending into Rs-M1; a wide sandy yellow triangular anal wedge, extending as a narrow sinuate line to vein M2; a faint, submarginal blackish brown line sharply indented basally in each space. **Male genitalia** (Fig. 35): Uncus slender, delicately curved downwards, as long as tegumen; subunci thin, approximately half the length of uncus; saccus moderately deep, aligned to vinculum; valvae slightly wider in median than in basal part, with a somewhat irregular dorsal surface and a short, blunt dorsal process pointing upwards, and a blunt and stout apical part, noticeably longer than in *P. arena*; aedeagus the length of valvae+saccus, strongly contorted in the middle, with the proximal opening nearly half its entire length, and a small apical tooth, slightly flattened dorso-ventrally.

FEMALE (Fig. 20): Sexual dimorphism is slight. The female (FW length 27 mm) differs from the male in that the FWV apex and HWV are rather densely covered with lighter brown scales, in the lighter FWV postdiscal band, giving more contrast to the submarginal blackish brown line.

ETYMOLOGY

The specific epithet is the Polish translation of Frank HERBERT's science-fiction novel "Dune", and is a allusion to the most closely related species, whose name means "sand".

REMARKS

This species is known so far only from the type locality, where it occurs sympatrically with the much more abundant *P. arena*.

***Pedaliodes ampayana* LAMAS, VILORIA et PYRCZ n. sp.**

(Figs. 13, 14, 33)

[*Pedaliodes* [n. sp.] LAMAS & VILORIA, MS; LAMAS et al., 2004: 213]

Type locality: Laguna Ank'ascocha, Santuario Nacional Ampay, Apurímac, Peru

MATERIAL EXAMINED

PERU: HOLOTYPE ♂: Laguna Ank'ascocha, Santuario Nacional Ampay, Apurímac, 3300-3350 m, 19.II.2005, T. Pyrcz & R. Garlacz *leg.* [MUSM]; PARATYPES (87 ♂♂ and 5 ♀♀): 16 ♂♂: Depto. Apurímac, S. N. Ampay, Laguna Ank'ascocha, 3300-3350 m, 19-21.II.2005, T. Pyrcz & R. Garlacz *leg.*; 1 ♂: Bosque Ampay, 30.IV.1998, P. Parrillo *leg.*; 1 ♂: same data but 3200 m, 1336/7255, 13.VI. 1999, P. Hocking *leg.*; 1 ♂: same data but 12.VI.1999, P. Hocking *leg.*; 1 ♂: same data but 3320 m, 1337/7255, 28.IV.1999, P. Hocking *leg.* [MUSM]; 13 ♂♂: Depto. Apurímac, S. N. Ampay, Laguna Ank'ascocha, 3300-3350 m, 19-21.II.2005, T. Pyrcz & R. Garlacz *leg.*; 1 ♀: same data; 1 ♀: same data but 21.II.2005; 1 ♀: same data but 3200 m, 18.II.2005, P. Boyer *leg.*; 9 ♂♂: same data but 18.II.2005, P. Boyer *leg.*; 7 ♂♂: same data but 19.II.2005; 5 ♂♂: Apurímac, S. N. Ampay, Ccorhuani, 3100 m, 19.V.2005, P. Boyer *leg.* [MZUJ]; 5 ♂♂: Apurímac, S. N. Ampay, Laguna Ankasq'ocha, 3200 m, II-III.2005, J. Bottger *leg.*; 2 ♂♂: Apurímac, Distrito Tamburco, Ccorhuani, 3100-3150 m, III.2005, J. Bottger *leg.*; 1 ♂: Apurímac, Karkatera, 3300-3350 m, III.2005, J. Bottger *leg.*; 2 ♂♂: Apurímac, Distrito Abancay, S. N. Ampay, Qda. Yanacchacha, 3200 m, 21.V.2005, T. Pyrcz *leg.* [TWP]; 5 ♂♂ and 1 ♀: Apurímac, S. N. Ampay, 3300-3350 m, III. 2005, J. Bottger *leg.*; 6 ♂♂: Apurímac, S. N. Ampay, Qda. Yanacchacha, 3200 m, 19.II.2005, P. Boyer *leg.*; 4 ♂♂: Apurímac, S. N. Ampay, Laguna Ankasq'ocha, 3200 m, 18.II.2005, P. Boyer *leg.*; 5 ♂♂: Apurímac, S. N. Ampay, Ccorhuani, 3100 m, 19.V.2005, P. Boyer *leg.*; 1 ♀: Apurímac, S. N. Ampay, Qda. Yanacchacha, 3200 m, 19.II.2005, P. Boyer *leg.* [PBF]; 3 ♂♂: Depto. Apurímac, S. N. Ampay, Laguna Ank'ascocha, 3300-3350 m, 19-21.II.2005, T. Pyrcz & R. Garlacz *leg.* [MBLI]

DIAGNOSIS

This species is easy to separate from the sympatric congeners, none of which has a yellow HWV anal wedge. *P. ampayana* differs from other allopatric Peruvian species, which possess similar HWV markings by the wide orange suffusion of the anal and outer margin of the HWD.

DESCRIPTION

MALE (Figs. 13): Wings: FW length: 27-30 mm (mean: 28.8 mm, n=28), with a subacute apex and straight outer margin. HW rounded, outer margin undulated. FWD dark brown, slightly lighter in distal one-third; fringes whitish and brown. HWD dark brown; anal and outer margin towards tornus with an orange and brick red suffusion, variable in size, in some individuals extending to mid anal margin and to cell M3-Cu1, in others restricted to tornus, but always present; fringes dark brown and pale brown. FWV medium brown, somewhat lighter and paler than on the upperside; a narrow pale yellow postdiscal streak extending from costa to vein M2 or M3, barely visible in some specimens; apical and subapical areas dusted with whitish and chocolate brown scales; a diffused submarginal band, chocolate brown, barely darker than the ground colour; a tiny, whitish submarginal dot in cell M1-M2, and in some individuals a second one in Cu1-Cu2. HWV medium brown with a chocolate brown sheen, suffused liberally with a fine, lighter "ripple" pattern, chestnut or pale brown, somewhat denser in

the submarginal area; a large, yellow anal wedge, very variable, in some individuals as a triangular with an undulated basal edge reaching to vein Cu1, in others extending towards vein M2 area as a narrow band; in most individuals a yellow mid-costal streak reaching to vein Rs, in some individuals connected to the anal wedge by a fine postmedian band; two, pale yellow submarginal dots in cells M3-Cu1 and Cu1-Cu2, the latter invariably larger. **Male genitalia** (Fig. 33): Uncus the length of tegumen, straight; subunci thin, half the length of uncus; valvae with a teeth-like dorsal process pointing distally, dorsal surface of valvae slightly undulated; saccus wide but shallow; aedeagus strongly contorted and flattened dorso-ventrally.

FEMALE (Fig. 14): Sexual dimorphism is slight. Dorsal and ventral surface noticeably lighter. FW length 28 mm (=3).

REMARKS

The nominotypical subspecies of *P. ampayana* occurs in the Ampay massif and the surrounding areas between the valleys of the rivers Apurímac and Pachachaca.

Pedaliodes ampayana chanka PYRCZ n. ssp.

(Figs. 15, 16, 34)

Type material: Cotahuacho, Pachuca, Apurímac, Peru.

MATERIAL EXAMINED

PERU: HOLOTYPE ♂: Apurímac, Distrito Pachuca, Cotahuacho, 3100 m, III.2005, J. Bottger leg., ex coll. T. Pyrcz, [MUSM]; PARATYPES (29 ♂♂ and 3 ♀♀): 24 ♂♂ and 2 ♀♀: same data as the holotype [TWP]; 2 ♂♂: same data as the holotype [MUSM]; 3 ♂♂ and 1 ♀♀: Apurímac, Cotahuacho, 3100 m, III.2005, J. Bottger leg. [PBF].

DESCRIPTION

MALE (Fig. 15): Head, thorax and abdomen: not differing from those of the nominotypical. Wings: FW length 27-29 mm (mean: 27.8 mm, n=18), apex subacute, outer margin slightly concave, very slightly truncated from apex to vein M2; HW outer margin scalloped. FWD uniform dark chocolate brown, lustrous; androconial patch medium sized, entering discal cell; fringes alternately dark brown and some milky white between the veins. HWD uniform dark chocolate brown, lustrous, hairy in basal one-third, a narrow brick red suffusion from mid anal margin to tornus; fringes brown, with some milky white scales from apex to vein M3. FWV: dark brown, lustrous in basal half; a faint postdical streak made of sparse milky white scales, gradually narrowing from costa to vein M2, in some individuals extending as a barely noticeable lighter shade to vein Cu2; a faint lighter brown suffusion in subapical area and along outer margin; a faint sinuate dark brown submarginal line from costa to cell M3-Cu1; apical area suffused with chocolate brown and a few rufous scales. HWV: dark brown, slightly darker than on the FW, almost uniform; a wide yellow anal wedge, variable in size and shape, in some individuals as a triangle with an irregular inner edge extending vein Cu1 or into cell M3-Cu1, in others with a smooth inner edge, extending as a

yellow, gradually narrowing band to vein M2; a well marked yellow submarginal dot in Cu1-Cu2, in some individuals a second, tiny dot in M3-Cu1; a barely noticeable blackish brown sinuate submarginal line, parallel to outer margin. **Male genitalia** (Fig. 34): Uncus very gently arched, with a blunt tip, the length of tegumen; subunci slender, about half the length of uncus; saccus wide and moderately deep, at a narrow angle to vinculum; valvae considerably wider in median part with a humped ampulla and a massive, though short pyramid-shaped dorsal process, apex blunt; aedeagus the length of valva+saccus, strongly contorted and flattened dorso-ventrally, to a lesser degree than in *P. tyro* or *P. melvillei* n. sp., with a short apical tip and proximal opening two-fifths the length of aedeagus.

FEMALE (Fig. 16): Differs from the male in the lighter dorsal brown, and the presence of a faint FW postdiscal streak; ventral surface also noticeably lighter brown, especially on the HW, yellow anal wedge paler and speckled with brown scales. FW length 28,5-29,5 mm (mean: 29 mm, n=2).

ETYMOLOGY

The Chanka are native inhabitants of the department of Apurímac and are rivals of the Inkas.

REMARKS

P. ampayana chanka differs from the nominate subspecies (Figs. 13, 14, 35) primarily in that the latter has a wider HWD brick red anal suffusion, extending along outer margin to Cu1-Cu2, prominent HWV lighter, yellowish suffusion and always marked Cu1-M3 submarginal dot, and occasionally present FWV submarginal yellow dots, never showing in *chanka*. *P. chanka* also resembles *P. sophismata*, which is however noticeably smaller, with a smaller, in some specimens barely visible HWD reddish anal markings, much more variable HWV yellow markings, but its wedge is never as wide on the anal margin as in subspecies *chanka* or *ampayana*. *P. ampayana chanka* also resembles *P. arena* in size, shape and markings, but the latter differs in the lighter, sandy yellow colour of the HWV anal wedge. The two subspecies of *P. ampayana* are apparently endemic of south-central Peruvian Andes and both occur on the left bank of the Río Apurímac. They are geographically separated by the deep canyon of the Río Pachachaca. *P. ampayana ampayana* occurs only in the Ampay massif. The range of *P. chanka* is unknown, but to the West it is mostly probably limited by the valley of the Río Pampas. The only other species of *Pedaliodes* found in the type locality of *P. ampayana chanka* was *P.* n. sp. VILORIA et PYRCZ (in press), which however occurs in puna grasslands, contrary to *P. ampayana*, a denizen of humid cloud and elfin forests. All known individuals of *P. ampayana chanka* were collected at 3100 m.

DISCUSSION

The taxa discussed herein, although certainly related as indicated by several common features in the colour pattern and genital morphology, are treated as specifically distinct. Some of them for obvious ecological reasons. *P. arena* and *P. diuna* are sym-



9-16. Adults (dorsum (left), venter (right)): 9. *Pedaliodes melvillei* male, Holotype (Qda. San Luis); 10. *P. melvillei* female, Paratype (Qda. San Luis); 11. *P. ackeryi* male, Holotype (Huayalloc); 12. *P. ackeryi* female, Paratype (Huayalloc); 13. *P. ampayana ampayana* male, Paratype (Ampay); 14. *P. a. ampayana* female, Paratype (Ampay); 15. *P. a. chanka* male, Holotype (Cotahuacho); 16. *P. a. chanka* female, Paratype (Cotahuacho)