REICHENBACHIA

STAATLICHES MUSEUM FÜR TIERKUNDE IN DRESDEN

Band 18 | Ausgegeben 10. Dezember 1980 | Nr. 4

New Species and Subspecies of Pachybrachys REDT. from Mongolia and China

(Coleoptera, Chrysomelidae)

With 26 Figures

L. N. MEDVEDEV & N. A. RYBAKOVA

Moscow

Three new species and two new subspecies of *Pachybrachys* REDT are described in a present paper as a result of many years investigations of senior author in Mongolian People Republic. A material for study comes mainly from collection of senior author and partly from Zoological Institute, Leningrad. Holotypes of all species described are deposited in Zoological Institute, Leningrad, paratypes also in L. MEDVEDEV's collection and in Hungarian Museum of Natural History, Budapest

Authors express their acknowledgment to Dr Z. KASZAB (Budapest) and Dr. G. MEDVEDEV (Leningrad) for the opportunity to study type specimens and other materials of *Pachybrachys* in their care.

Pachybrachys lopatini sp. n.

This new species is identical in external structure with *P. distictopygus* JACOBS. as well as usually in coloration, expect more lightly coloured specimens which are rather abundant in *P. lopatini*. Both species differs only in structure of aedeagus, geographical distribution and ecological peculiarity Females of both species are practically undistinguishable. Aedeagus slightly widened in apical third, with apex broadly rounded and ended with short blunt protuberance (fig. 16); in lateral view underside has very distinct hump, which forms an angle about 90°, pointed or slightly rounded (fig. 17–18). In *P. distictopygus* aedeagus has no such hump at all and its underside is evenly convex (fig. 19–20).

Coloration of body sometimes identical with *P. distictopygus*, sometimes more light, especially on elytra (fig. 1–4). The first joint of fore tarsus of male (fig. 11) widened in same manner as in *P. distictopygus*. Length of body male 2.6–3.3 mm, female 3–3.3 mm.

This species was recorded for Mongolia as *P. distictopygus* JACOBS. (LOPATIN, 1975), whereas a real *P. distictopygus* was described as new species, *P. kaszabi* LOP We had an opportunity to study types of all these forms thanks the kindness of Dr. Z. KASZAB, Hungarian Museum of Natural History, and Dr. G. MEDVEDEV, Zoological Institute, Leningrad.

Mongolia Selenga aimak: Shamar, 10.–24. VII. 1976, 13. VII.–9. VIII. 1978, leg. ZAITZEV, 1 holotype (male) and paratypes. – Bulgan aimak, Hilgant on Selenga river, 23. VII. 1975, leg. ZAITZEV – Central aimak Undzhul, 7 km N Senginijn-Huduk, 4. VII. 1974, leg. PUNTSAGDULAM; mountain Ara-Ula, near Undzhul, 1. VII. 1974, leg. L. MEDVEDEV – Chentej aimak: 23 km NE Bayan-Azraga, 5. VII. 1976, leg. TSERENDOLGOR; Bayan-Tsagan, 33 km SW Chalchgol, 31. VII. 1976, leg. TSERENDOLGOR; 30 km ESE spring Dzavsar-Bulak, 25. VII. 1971, leg. G. MEDVEDEV Tamsag-Bulak, 24.–25. VII. 1976, leg. TSERENDOLGOR; 15–32 km mountain Salchit, 20.–21. VII. 1972, leg. G. MEDVEDEV, 1. VIII. 1976, leg. TSERENDOLGOR; Ar-Bulak, 75 km WSW mountain Salchit, 24. VII. 1971, leg. KOZLOV Chamardava, 70 km E lake Bayan-Nur, 1. VIII. 1976, leg. TSERENDOLGOR, 20. VII. 1971, leg. KOLZOV

USSR Dauria, Chita province, lake Hara-Nor, 24.–26. VII. 1966, leg. CHERNOVA; Borzinsky district, Armogotuj, Klichkinsky mountain, 24. VII. 1966; Ussuri region, lake Chanka, Troitzkoe, 1. VII. 1909; lake Chanka, Kamen-Rybolov, 16. VII. 1908.

China Pekin, 23. VI. 1936, leg. FILIPPOV

Korea Hokusanmen, Keishohokudo, 14. V 1933, leg. UMENO and YAMAUCHI (with CHUJO's label *P. scriptidorsum* MARS.); Prov. Hoanhado, Sariuon, 24. VII. 1950, leg. BORCHSENIUS; Prov. Hamgen Namdo, Pukchen, 2. VII. 1950, leg. BORCHSENIUS; Prov. Hamgen Namdo, Yandok, 28. VII. 1950, leg. BORCHSENIUS. – In total 72 paratypus.

P. distictopygus JACOBS. is widely distributed in Mongolia, except extreme western and southern regions and in southern Siberia from Tuva to Pacific coast. In Mongolia this species is a very typical component of dry steppes.

P. lopatini sp. n. is distributed in general eastward as compared with *P. distictopygus*. It is known from east Mongolia, Transbaicalia, Ussuri region, east China and Korea. In Mongolia this species usually lives in forest-steppe localities, usually with Ulmus as main component. Feeding on Caragana bushes.

Pachybrachys caprea dzhungaricus subsp. n.

A single female at our disposal is very similar to *P. caprea* WSE., but differs immediately in quite confused elytral punctures, while in *P. caprea* WSE. outermost punctures are arranged in more or less regular rows. This form may be proved as a valid species when a male will be found.

Head and upperside dirty yellow with dense black punctures, vertex, longitudinal stripe on frons and supraantennal spots black, prothorax with indistinct black M, scutellum black with yellow spot. Underside black, inner part of mesepisterna and spots on anal segment and pygidium fulvous. Legs fulvous, apices of femora with whitish flavous spots.

Frons flat and broad, a space between upper lobes of eyes 1.5 time as broad as between antennal insertions. Prothorax 1.6 times as broad as long. Elytra with dense and strong uniform punctures, not forming regular rows near side margins and apices (fig. 5).

Length 3.7 mm, breadth 1.9 mm.

Chovd aimak: Baytag-Bogdo-Nuru, mountain Altan-Obo, 1900–2200 m, 25.–28. VII. 1975, leg. L. MEDVEDEV & VORONOVA, 1 female (holotype).

Pachybrachys caraganae changaica subsp. n.

This subspecies is morphologically and in coloration (fig. 6–7) entirely identical with

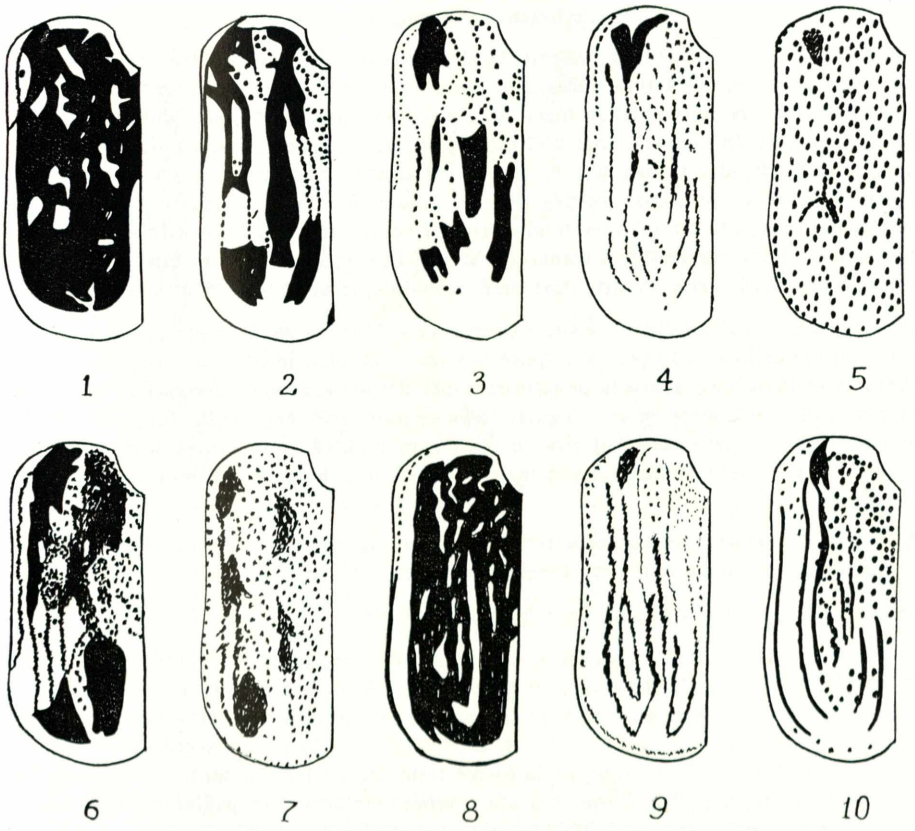

Fig. 1–10. Elytral pattern. 1–4: *P. lopatini* sp. n. – 5: *P. caprea dzhungaricus* subsp. n. – 6–7: *P. caraganae changaica* subsp. n. – 8–9: *P. mongolensis* sp. n. – 10: *P. potanini* sp. n.

nominate form and differs only in form of aedeagus. This organ on underside near apex with transverse row of hairs, interrupted in middle, the apex is broadly rounded with acute apical tooth (fig. 13). In lateral view its underside is evenly convex, without gibbosity in middle part (fig. 14) as in nominate subspecies (fig. 15).

Length of male 2.8–3.2 mm, of female 3–3.4 mm.

Bayan-Chongor aimak: river Baidrag-Gol, 19. VI. 1976, leg. L. MEDVEDEV, holotype (male) and 4 paratypes; Bumbeger, 18.–19. VI. 1976, leg. L. MEDVEDEV, 2 paratypes; Shine-Dzhinst, 1. VII. 1973, leg. L. MEDVEDEV, 4 paratypes. – Ubur-Changaj aimak: 10 km NNE Charachorin, 19. VI. 1973, leg. L. MEDVEDEV, 1 paratype; mountain Ushugin-Nuru, southern slope, 27. V. 1972, leg. L. MEDVEDEV, 2 paratypes.

Beetles live in mountain dry steppe on Caragana.

The nominate subspecies is distributed in mountain system Gobi Altaj, including mountains Baga-Bogdo, Arz-Bogdo, and Ich-Shanchaj-Ula.

Pachybrachys mongolensis sp. n.

Upperside flavous with black pattern hind part of vertex, longitudinal stripe on frons, connected with supraantennal spots, and 5 more or less distinct spots on reddish flavous prothorax, usually connected in black M. Scutellum flavous or black with flavous spot. Elytra usually with humeral spot and black punctures, more or less confluent in narrow longitudinal irregular stripes (fig. 9), but in melanistic specimens they can be dark with flavous irregular spots and stripes (fig. 8). Underside black, epimera and sometimes episterna of mesothorax fulvous, hind sternit of venter and pygidium with 2 yellow spots each, sometimes connected in a transverse stripe. Legs reddish flavous, femora with white apical spots, very rarely slightly darkened in middle, tarsi darkened, at least apically.

Head sparsely and boldly punctured except vertex, frons moderately narrow, as wide between upper lobes of eyes as a space between antennal insortions. Prothorax 1.4–1.5 times as wide as long, sparsely punctured, more dense near sides. Elytra 1.3–1.4 times as long as wide, with more or less regular rows of punctures, especially along side margins and posteriorly; the outermost row of punctures divided from others with wide interspace. The first joint of fore tarsi in male widened and elongate, but more narrow as the third joint.

Aedeagus (fig. 25–26) with narrow triangular acute apex, in lateral view slightly gibbous, on underside in apical half with longitudinal central ridge.

Length of body male 2.5–3.3 mm, female 2.8–4.2 mm.

This species, very usual in southern Mongolia, was interpreted by LOPATIN (1964) as *P. scripticollis arisi* PIC. The typical *P. scripticollis* FALD. is distributed in Transcaucasus, Asia Minor, Turcomania and Afghanistan and has quite different structure of aedeagus. Practically nothing is known about var. *arisi* PIC from Kashgar, except very short description which speaks: "Distinct de la forme type décrite par Faldermann, au moins par l'ecusson foncé, les pattes d'une coloration générale claire et le pygidium foncé sur son milieu" (PIC, 1908). Neither LOPATIN nor authors have studied a type of *P. arisi*, but according PIC's description it differs from species in question at least in black coloration of scutellum.

Chovd aimak: mountain Ich-Chavtgijn-Nuru, springs Narijn-Bulak, Dzeren-Bulak, 1900–2000 m, 22.–23. VII. 1975, leg. L. MEDVEDEV – Gobi Altaj aimak: Atas-Ula, 28. VI. 1973, leg. L. MEDVEDEV, 1 male (holotype) and paratype; Chavtagijn-Bulak, 75 km WNW somon Altaj, 1400 m, 19. VII. 1975, leg. L. MEDVEDEV mountain Adz-Bogdo, 20–50 km E Altaj, 2060 m, 15.–18. VII. 1975, leg. L. MEDVEDEV – Bajanchongor aimak: river Chulsyn, 20 km SW lake Bon-Tsagan, mountain Chara-Argalant-Nuru, 5.–7 VII. 1975, leg. L. MEDVEDEV lake Orog-Nor, North Gobi, 20.–25. V 1926, leg. KOZLOV Dzamyn-Bilchuhu-Bulak, 27 VI. 1973, leg. L. MEDVEDEV 18 km W Bajan-Leg, mountain Sudzhi, 2. VI 1972, leg. L. MEDVEDEV mountain Sex-Tsagan-Bogdo, 30 km NW Tsagan-Bulak, 30. VI. 1973, leg. L. MEDVEDEV spring Talyn-Belech-Bulak, 40 km SSE Echin-gol, 1250 m, 26. VII. 1977, leg. L. MEDVEDEV 40 km SW Bayan-Under, 1350 m, 16. VII. 1974, leg. L. MEDVEDEV – Uburchangaj aimak northern slope of mountain Adz-Bogdo, 15–20 km SE Chovd, 31. V.–1. VI. 1972, 11. VII. 1970, leg. L. MEDVEDEV northern slope of mountain Baga-Bogdo, 30. V 1972, leg. L. MEDVEDEV 50 km W Bogdo, 1. VI. 1972, leg. L. MEDVEDEV – Middle Gobi aimak: 30 km SSE Adatsag, mountain Baga-Gazryn-Ula, 23. VI. 1974, leg. L. MEDVEDEV Under-Shil, 21.–22. VI. 1974, leg. L. MEDVEDEV 10 km E somon Gurvan-Sajchan, 22. VI. 1974, leg. L. MEDVEDEV – South Gobi aimak Gurvan-Sajchan, southern

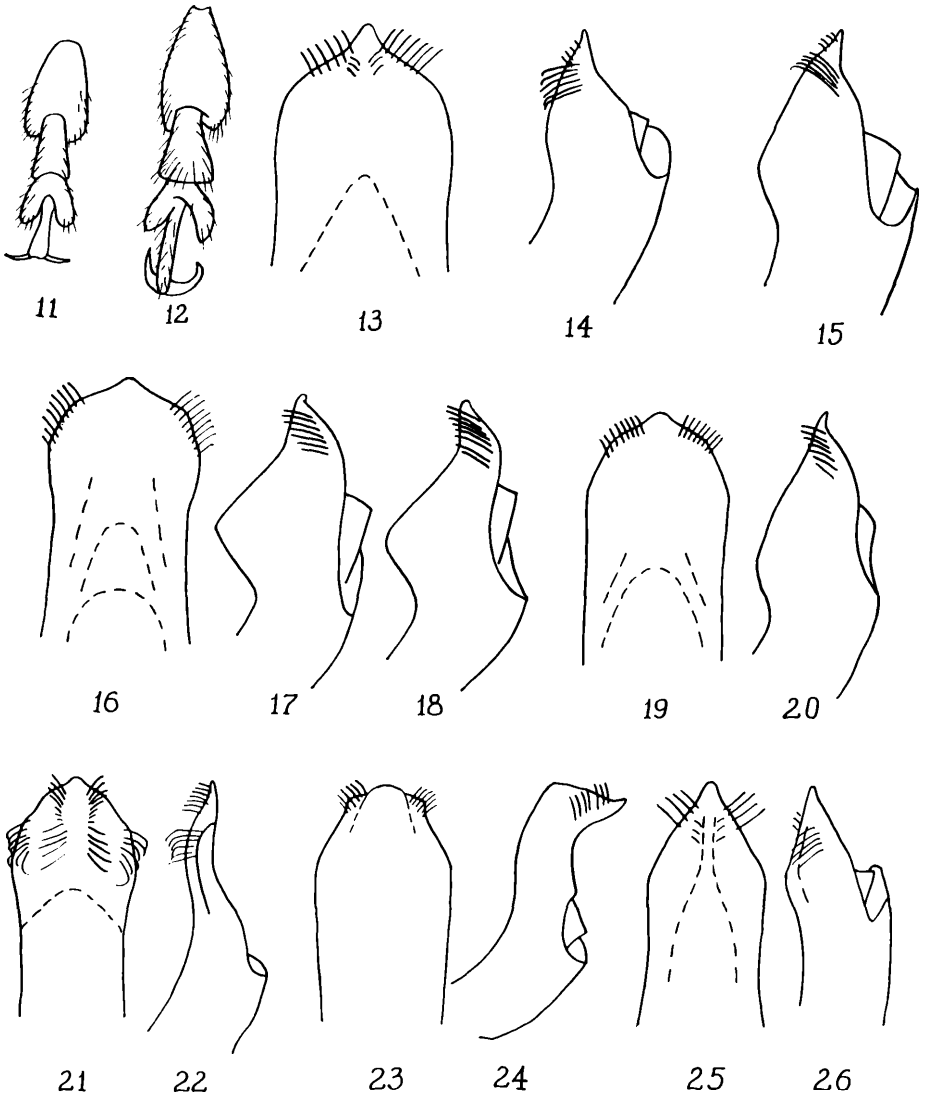

Fig 11–12. Fore tarsi of male. 11 *P. lopatini* sp. n. – 12: *P. potanini* sp. n.
Fig. 13–26. Aedeagus, ventral and lateral. 13, 14: *P. caraganae changaica* subsp. n. – 15: *P. caraganae caraganae* LOP. – 16–18: *P. lopatini* sp. n. – 19, 20: *P. distictopygus* JACOBS. – 21, 22: *P. potanini* sp. n. – 23, 24: *P lineatus* WSE. – 25, 26: *P. mongolensis* sp. n.

slope, 10 km N Churmen, 14. VI. 1972, leg. L. MEDVEDEV Gurvan-Sajchan near Bulgan, northern slope, 22. VII. 1971, leg. L. MEDVEDEV mountain Tost-Ula, well Tsagan-Dere-Chuduk, 22. VI. 1974, leg. L. MEDVEDEV mountain Ich-Shanchaj-Ula, 70 km E Tsogd-Cecej, 12. VI. 1972, leg. L. MEDVEDEV mountain Churyn-Chara-Nuru, 25 km W Nojon,

20. VI. 1973, leg. G. MEDVEDEV 20 km W Nojon, 2000 m, 24. VII. 1977, leg. L. MEDVEDEV 20 km W Tojrim, western slope of Tost-Ula, 23. VII. 1973, leg. L. MEDVEDEV. – East Gobi aimak: 40 km SO Chojr, 22. VI. 1971, leg. L. MEDVEDEV 20 km N Dalan-Dzargalan, 12. VI. 1971, leg. M. KOZLOV, 15 km E Sajchan-Dulan, 20. VI. 1974, leg. L. MEDVEDEV 38 km SO Chojr, 21. VI. 1963, leg. Z. KASZAB; 45 km NE Bajan-Munch, 3. VII. 1971, leg. KERZHNER. – In total 88 paratypes.

Pachybrachys potanini sp. n.

Head and upperside dirty fulvous with black marks: head with hind part of vertex and longitudinal stripe on frons, bifurcate anteriorly and connected with supraantennal spots; prothorax (more reddish as elytra) with diffused M, elytra with suture and punctures which are more or less connected in longitudinal stripes, mostly laterally and in hind part (fig. 10). Underside pitchy brown to black, hind margins of abdominal segments 1–4, emargination of anal segments and 4 spots of pygidium (2 small on sides and 2 moderately large und partly connected near apex) reddish fulvous. Legs fulvous, femora with yellow-white apical spot, often darkened on upperside.

Head sparsely punctured, frons narrow. Prothorax with large and sparse punctures, more dense to side margins and with impunctured fulvous stripe along fore and side margins. Elytra with large punctures arranged in 3 distinct rows along sides and a few irregular short rows in the middle and near suture posteriorly. The first joint of fore tarsi elongate, as long as the third (fig. 12).

Aedeagus (fig. 21–22) widened apically, with rounded-triangular apex, ending in a short blunt protuberance; on underside before apex with blunt wide ridge, dividing lateral impressions and furnished on sides with long curved hairs; same hairs there are also on small projections of lateral margins before apex. In side view aedeagus is rather thin, especially in apical half, without distinct gibbosity.

Length of body: male 3.3–3.6 mm, female 3.6–4.1 mm.

China, between Hun-shui-gu and Li-fan, 18. VIII. 1893, leg. G. POTANIN, holotype (male) and 16 paratypes.

This species is similar in coloration and morphology with *P. lineatus* WSE. from Szechuan, but differs immediately in structure of aedeagus, which is strongly gibbous in *P. lineatus* WSE. (fig. 23–24).

References

LOPATIN, I., 1964: Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. 17 Chrysomelidae, partim (Coleoptera). – Folia entom. hungar. **17** (24): 365–373.

ЛОПАТИН, И. К., 1975: Жуки-листоеды (Coleoptera, Chrysomelidae) Монгольской Народной Республики. – Насекомые Монголии, вып. **3**: 191–233.

PIC, M., 1908: Descriptions ou diagnoses et notes diverses. Échange **24**: 45.

Address of senior author:
Dr. L. N. Medvedev, Academy of Sciences of USSR, Institute of Evolutionary Morphology and Ecology of Animals,
Leninsky pr. 33, 117 071 Moscow, USSR.