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On the *Nazeris* fauna of China I. The species of the Qinling Shan, the Daba Shan, and adjacent mountain ranges (Coleoptera: Staphylinidae: Paederinae)

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Abstract. Sixteen species of *Nazeris* Fauvel, 1873 are recognized in the Qinling Shan, the Daba Shan, and adjacent mountain ranges in Central China. Fourteen of them are described for the first time, illustrated, and distinguished from geographically close congeners: *N. acutus* sp. n. (S-Shaanxi: Daba Shan), *N. angulatus* sp. n. (Shaanxi/Chongqing/Hubei: Daba Shan), *N. bisinuosus* sp. n. (S-Shaanxi: Daba Shan), *N. clavatus* sp. n. (W-Hubei: Daba Shan), *N. compressus* sp. n. (Shaanxi/Chongqing: Daba Shan), *N. cultellatus* sp. n. (S-Shaanxi, Henan, Anhui), *N. custoditus* sp. n. (S-Gansu: Qinling Shan), *N. dilatatus* sp. n. (S-Shaanxi/N-Sichuan: Micang Shan), *N. extensus* sp. n. (S-Shaanxi: Daba Shan), *N. longilobatus* sp. n. (S-Gansu: mountains SE Longnan), *N. micangicus* sp. n. (S-Shaanxi: Micang Shan), *N. parvincisus* sp. n. (S-Shaanxi: Daba Shan), *N. rectus* sp. n. (W-Hubei: Daba Shan), *N. sociabilis* sp. n. (S-Gansu: mountains SE Longnan). The species are keyed and their distributions are mapped. Based on their external and male sexual characters, they represent five lineages. A checklist of the *Nazeris* species of China and Taiwan is compiled. The genus now includes 143 species and seven subspecies; 66 of them have been reported from mainland China.

Key words. Taxonomy, Staphylinidae, Paederinae, *Nazeris*, Qinling Shan, Daba Shan, China, new species, distribution maps, key to species.

INTRODUCTION

Nazeris Fauvel, 1873 is currently assigned to the subtribe Astenina of the tribe Paederini. The monophyly of the genus is constituted particularly by the morphology of the aedeagus, which is characterized by the presence of a pair of dorso-lateral apophyses (see discussion in Assing 2009), a unique character among Paederinae. All known *Nazeris* species are micropterous, flightless, and have more or less restricted distributions, which suggests that the genus is probably a phylogenetically old taxon and that the current distribution, especially distribution gaps, may be interpreted primarily as a result of extinction rather than expansion by dispersal and colonization events.

According to the Palaearctic Catalogue (Smetana 2004), an update of this catalogue (Schülke unpubl.), and a manuscript (Assing unpubl.), *Nazeris* is currently represented in the Palaearctic region sensu Smetana (2004) by 121 species and seven subspecies. Eleven species are known from the West Palaearctic (Assing 2009), thirteen from the Himalaya (North India and Nepal), 25 species and six subspecies from Japan (exclusive of the doubtful record of *N. siamensis* Rougemont, 1988), one species from South Korea, 19 species and one subspecies from Taiwan, and 52 species from mainland China. Only eight additional species have been reported from adjacent parts of the Oriental region, suggesting that the distribution of the genus is essentially Palaearctic (Assing 2009). Seven species were described from North Vietnam (Ito 2010a, b, Jarrige 1948, Watanabe 1996), and Rougemont (1988) described *N. siamensis* from northern Thailand. According to Smetana (2004), this species was subsequently recorded also from Japan. However, I have been unable to trace the primary record, nor is there an entry of such a record in Lee Herman´s unpublished catalogue (Herman, pers. comm.). In view of the flightlessness and generally restricted distributions of *Nazeris* species, it seems likely that the record of *N. siamensis* from Japan is based on an error.

In mainland China, *Nazeris* ranks second among the paederine genera with respect to the diversity of micropterous species with restricted distributions, outnumbered in described species only by *Lathrobium* Gravenhorst, 1802 (Assing 2013). The provinces with the greatest diversity of previously described *Nazeris* species are Zhejiang (15 species) and Yunnan (11), followed by Sichuan (8), Guangxi (6), Anhui (3), Jiangxi (2), Fujian (2), Shaanxi (2), Xizang (2), and Guizhou (1). For details see the checklist provided in this paper. The two species from Shaanxi are the only ones that had been recorded from the Qinling Shan, none was known from the Daba Shan. Not a single species had been reported from Gansu and Hubei.

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The Qinling Shan is a geologically old mountain range in central China with an east-west extension of approximately 650 km from southern Gansu in the east to Henan in the west. The highest peak of the Qinling Shan is the Taibai Shan at 3,767 m. This mountain range separates the temperate north of China from the south, whose climate is mainly influenced by subtropical monsoon. Data on the geology, geography, and climate were compiled by Ratschbacher et al. (2003) and Rost (1993). Adjacent to the Qinling Shan is the Daba Shan, a mountain range reputed for its glacial relicts and extending along the border between Shaanxi, Sichuan, and Chongqing eastwards into western Hubei (Fig. 1). The Shennongjia massif forms the easternmost part of the range and has the highest peaks, with six peaks ranging in altitude from 3,000 to 3,105 m.

During a joint field trip to Shaanxi, Gansu, and Sichuan conducted by Michael Schülke, David Wrase (both Berlin), and the author, five undescribed Nazeris species were collected in the Qinling Shan and the adjacent Micang Shan (southern Shaanxi and southern Gansu provinces). An examination of material collected during earlier field trips to the Qinling Shan and the Daba Shan by Michael Schülke and David Wrase yielded ten additional undescribed species.

MATERIAL AND METHODS

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs. The maps were created using MapCreator 2.0 (primap) software.

Body length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

For a discussion of the terminology of the aedeagal morphology see Assing (2009).

Fig. 1. Geographic position of the Qinling Shan and the Daba Shan in China. The frame marks the limits of the distribution maps.

COLLECTION MATERIAL DEPOSITORIES

SNUC	Insect Collection of Shanghai Normal University, Shanghai
ZFMK	Zoologisches Forschungsmuseum Alexander Koenig, Bonn
cAss	author´s private collection
cSch	private collection Michael Schülke, Berlin

RESULTS

Diversity and distribution

Including the new species described below, *Nazeris* now includes 143 species, with 66 species known from mainland China. Fourteen species are described from the south of Gansu province, from Hubei, Shaanxi, Sichuan, the border between Shaanxi and Chongqing, Henan, and Anhui. Thus, the genus is now represented in the study region by a total of 16 species, 15 of them endemic. Six species are known from the Qinling Shan and adjacent mountain ranges, two from the Micang Shan, and eight from other parts of the Daba Shan.

The available data suggest that the *Nazeris* species of the study region are locally endemic. Only *N. cultellatus* has a less restricted distribution, which ranges from the central parts of the Qinling Shan eastwards to the Tianzhushan in Anhui. In general, closely related species, particularly hypothesized adelophotaxa, are at the same time geographically close, suggesting that the separation of gene pools and ensuing speciation was – at least primarily – initiated by local geological and climatic events.

Species groups

Intrageneric phylogenetic affiliations had not been addressed previously. Based on external and male sexual characters, the *Nazeris* fauna of the study region is represented by five lineages.

The *N. shaanxiensis* group includes five species (*N. shaanxiensis*, *N. custoditus*, *N. sociabilis*, *N. micangicus*, *N. dilatatus*) distributed in the Qinling Shan and the Micang Shan and is characterized by an aedeagus with a short and stout ventral process and with short and stout dorso-lateral apophyses, as well as by a broad and usually not very deep posterior excision of the male sternite VIII. Among the species of this group, *N. dilatatus* from the Micang Shan takes a somewhat isolated position, since it differs from the other representatives by rather numerous characters (coloration; modified shape of male sternite VII; relatively deep and broad posterior excision of male sternite VIII; apices of dorso-lateral apophyses obliquely truncate and with small tooth-like projections).

The *N. parvincisus* group is represented by a single species, *N. parvincisus* from the Daba Shan. It is characterized by an aedeagus with a short and stout, apically convex ventral process and with short and stout dorso-lateral apophyses, a small posterior excision of the male sternite VII, strongly convex eyes, coarse and dense punctation of the abdomen, especially of tergites III-VI (punctation of tergite VI as dense and coarse as that of tergite IV), and coarse, dense, and partly confluent punctation of the pronotum and elytra. The similar general morphology of the aedeagus (short and broad ventral process, relatively short and stout dorso-lateral apophyses) suggests that the *N. parvincisus* group is most closely affiliated with the *N. shaanxiensis* group.

The most diverse and widespread species group is the *N. longilobatus* group, which comprises six species, *N. longilobatus* and *N. huanghaoi* from the Qinling Shan, as well as *N. clavatus*, *N. rectus*, *N. bisinuosus*, and *N. acutus* from the Daba Shan. This lineage is characterized by the morphology of the ventral process of the aedeagus (slender and in ventral view acute, dorsally mostly with membranous extensions), the mostly long, slender, and distinctly sclerotized dorso-lateral apophyses, and a relatively deep and mostly narrow posterior excision of the aedeagus. Based on the external and male sexual characters, three species pairs are identified. One is represented by *N. longilobatus* + *N. huanghaoi* (relatively large body size, long elytra, similar morphology of the aedeagus), one by *N. clavatus* + *N. rectus* (non-areolate punctation of the head; similar morphology of the aedeagus), and one by *N. bisinuosus* + *N. acutus* (small body size, similar morphology of the aedeagus).

The *N. extensus* group includes two species distributed in the Daba Shan: *N. extensus* and *N. angulatus*. The monophyly of this group is constituted particularly by the derived morphology of the aedeagus (ventral process slender, weakly sclerotized, and with pronounced dorsal extensions; dorso-lateral apophyses long and slender, subbasally sinuate and apically straight) and by the conspicuously coarse and granulose punctation of the head. In addition, the species of this group share a slender habitus, a pronotum with an uneven surface (in posterior half on either side with elevations and irregularly distributed punctation) and not particularly dense punctation, and a male sternite VIII with a relatively small and somewhat V-shaped posterior excision. Based on the general morphology of the aedeagus, the *N. extensus* group is probably most closely affiliated with the *N. longilobatus* group.

The *N. cultellatus* group includes two species, *N. cultellatus* from the Qinling Shan and *N. compressus* from the Daba Shan. These species share a derived morphology of the aedeagus (ventral process laterally conspicuously compressed, ventral face forming a sharp edge), as well as rather small body size (length of forebody 2.3–2.8 mm), relatively pale coloration (forebody reddish to dark-

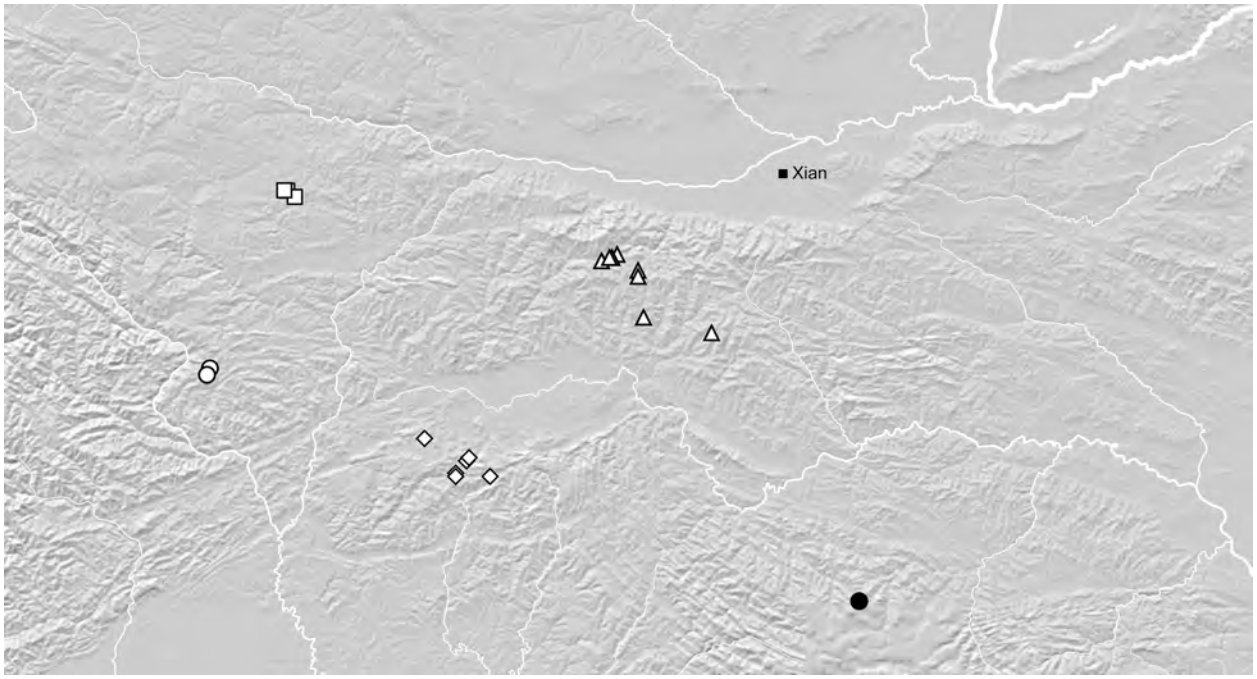


Fig. 2. Distributions of species of the *N. shaanxiensis* group (open symbols) and of the *N. parvincisus* group (filled symbol): *N. sociabilis* (open circles); *N. custoditus* (open squares); *N. dilatatus* (open diamonds); *N. shaanxiensis* (open triangles); *N. parvincisus* (filled circles).

brown), the non-areolate punctation of the head, and a relatively small and broad posterior excision of the male sternite VIII.

Ecology

The examined material was mainly collected in various forest habitats, both deciduous and coniferous, by sifting leaf litter and moss. The altitudes where the endemic species were found range from 1070 to 2400 m, with the majority of records ranging from 1400 to 2100 m. In Henan and Anhui, *N. cultellatus* was also collected at altitudes below 1000 m. On numerous occasions two or three species were found together in the same samples. Except for *N. acutus* and *N. bisinuosus* (one observation), syntopic species belonged to different species groups. Teneral adults were represented in the material of three species, *N. micangicus* (August), *N. dilatatus* (August), and *N. rectus* (July).

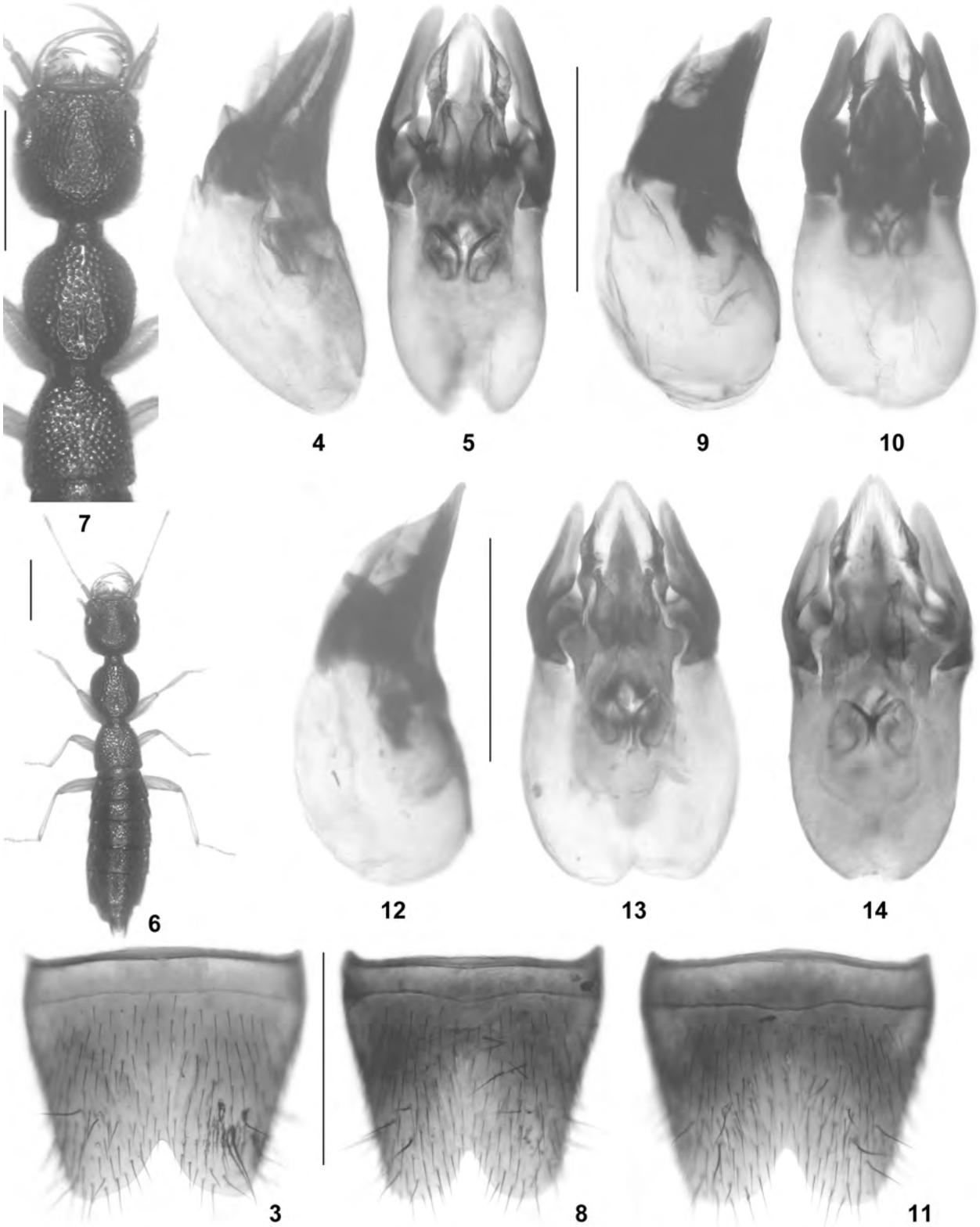
The *Nazeris shaanxiensis* species group

Nazeris shaanxiensis Hu & Li, 2010 (Figs 2–5)

Type material examined. Paratypes: 1♂: "Foping, Shaanxi Prov., alt. 1250–1400 m, 18-VII-2004, HU Jia-Yao, TANG Liang & ZHU Li-Long leg. / [Paratype] *Nazeris shaanxiensis* HU & LI, 2010, SHNU Collections" (cAss); 1♀: "West Sangongli Gou, Houzhenzi, Zhouzhi County, Shaanxi Prov. / N 33.50.613 E 107.48.524, alt. 1336 m, 17~19-V-2008, HUANG Hao & XU Wang leg. / [Paratype] *Nazeris shaanxiensis* HU & LI, 2010, SHNU Collections" (cAss).

Additional material examined. China: S-Shaanxi: 2♂, 4♀, Qinling Shan, pass on road Zhouzhi-Foping, 105 km SW Xi'an, 33°46'N, 107°58'E, 1700 m, N-slope, small creek valley, mixed deciduous forest, moss sifted, 3.VII.2001, leg. Schülke (cSch, cAss, ZFMK); 2♀, Qinling Shan, pass on road Zhouzhi-Foping, 105 km SW Xi'an, 33°44'N, 107°58'E, 1880 m, base of rocks, sifted, 4.VII.2001, leg. Schülke (cSch); 3♀, Qinling Shan, river bank above Houzhenzi, 115 km WSW Xi'an, 33°50'N, 107°47'E, 1450 m, mixed deciduous forest, moss sifted, 4.–5.VII.2001, leg. Schülke & Wrase (cSch, cAss).

Diagnosis. In external characters, *N. shaanxiensis* is highly similar to *N. custoditus* (see the following section). It is distinguished from this species only by the shape of the male sternite VIII (slightly more transverse and with slightly broader posterior excision) (Fig. 3), and by the shapes of the ventral process and of the dorso-lateral apophyses of the aedeagus (Figs 4–5).



Figs 3–14. *Nazeris shaanxiensis*, paratype (**3–5**), *N. custoditus* (**6–10**), and *N. sociabilis* (**11–14**). **3, 8, 11.** Male sternite VIII. **4–5, 9–10, 12–14.** Aedeagus in lateral and in ventral view. **6.** Habitus. **7.** Forebody. Scale bars: 6–7: 1.0 mm; 3–5, 8–14: 0.5 mm.

Distribution and natural history. This species is endemic to the Qinling Shan (environs of the Taibai Shan) (Fig. 2), where it was collected at altitudes of 1200–1880 m (Hu et al. 2010; material examined), occasionally together with *N. huanghaoi* and/or *N. cultellatus*.

Nazeris custoditus sp. n. (Figs 2, 6–10)

Type material. Holotype ♂: "CHINA [5] - S-Gansu, N Chengxian, W-Qinling Shan, 34°10'17''N, 105°42'56''E, 1850 m, 29.VII.2012, V. Assing / Holotypus ♂ *Nazeris custoditus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 1♀: "CHINA - S-Gansu [CH12-05], W-Qinling Shan, 47 km N Chengxian, 34°10'17''N, 105°42'56''E, 1850 m, mixed secondary forest margin, litter sifted, 29.VII.2012, M. Schülke" (ZFMK); 1♀: "CHINA [4] - S-Gansu, N Chengxian, W-Qinling Shan, 34°08'16''N, 105°46'42''E, 1760 m, 28.VII.2012, V. Assing" (cAss); 1♂: "CHINA [4b] - S-Gansu, N Chengxian, W-Qinling Shan, 34°08'16''N, 105°46'42''E, 1760 m, 28.VII.2012, V. Assing" (cAss); 1♀: "CHINA - S-Gansu [CH12-04], W-Qinling Shan, 43 km N Chengxian, 34°08'16''N, 105°46'42''E, 1760 m, N-slope, secondary deciduous forest margin, sifted, 28.VII.2012, M. Schülke" (cSch); 2♀: "CHINA [6] - S-Gansu, N Chengxian, W-Qinling Shan, 34°10'20''N, 105°42'10''E, 1830 m, 29.VII.2012, V. Assing" (cAss).

Etymology. The specific epithet is the past participle of the Latin verb custodire (to beware, to arrest, to keep in custody). It refers to the fact that the species was discovered in an area of non-evident military interest, which we were unaware of and which earned us a 7-hour custody and interrogation by military personnel.

Description. Body length 5.3–5.9 mm; length of forebody 2.8–3.0 mm. Habitus as in Fig. 6. Coloration: head and elytra dark-brown; pronotum usually blackish-brown, i.e., slightly darker than head and elytra; abdomen blackish-brown to blackish; legs and antennae yellowish.

Head (Fig. 7) indistinctly oblong, 1.02–1.06 times as long as broad, and of somewhat variable shape, postocular region weakly and evenly convex to strongly convex in dorsal view; punctation dense and areolate; interstices without microsculpture, reduced to narrow ridges, occasionally in median dorsal portion slightly broader; eyes of moderate size and moderately convex, approximately 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna 1.5–1.7 mm long.

Pronotum (Fig. 7) approximately 1.15 times as long as broad and 0.85–0.90 times as broad as head; punctation non-areolate, distinctly coarser than that of head, dense but less so than that of head; interstices narrower than diameter of punctures, glossy; impunctate midline narrow, mostly of more or less reduced length and sometimes present only in posterior half.

Elytra (Fig. 7) 0.55–0.60 times as long as pronotum; humeral angles obsolete; punctation dense and coarse, punctures denser and slightly less coarse than those of pronotum, sometimes shallower and less defined; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.20–1.25 times as broad as elytra; punctation dense and coarse on anterior tergites, gradually becoming less dense and finer towards posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites VI and VII unmodified; sternite VIII with unmodified pubescence, posterior excision relatively small and V-shaped, its depth approximately 1/5 the length of sternite (Fig. 8); aedeagus approximately 0.9 mm long; dorso-lateral apophyses strongly sclerotized, short, and stout, not reaching apex of median lobe (Figs 9–10).

Comparative notes. The similar external and male sexual characters suggest that *N. custoditus* is closely related to *N. shaanxiensis*. It is distinguished from that species by on average darker coloration, a somewhat broader posterior excision of the male sternite VIII, shorter, stouter and more strongly sclerotized dorso-lateral apophyses (in *N. shaanxiensis* projecting beyond apex of median lobe), and the differently shaped ventral process, particularly the rounded apex in ventral view (*N. shaanxiensis*: apex of ventral process acute in ventral view).

Distribution and natural history. The species was found in two localities in the western Qinling Shan, to the north of Chengxian (Fig. 2). The specimens were sifted from leaf litter in secondary deciduous and mixed forests and from a heap of rotting plants at altitudes of 1760–1850 m.

Nazeris sociabilis sp. n. (Figs 2, 11–15)

Type material. Holotype ♂: "CHINA [13] - S-Gansu, mountains SE Longnan, sifted, 33°13'03''N, 105°14'55''E, 2080 m, 4.VIII.2012, V. Assing / Holotypus ♂ *Nazeris sociabilis* sp. n., det. V. Assing 2012" (cAss). Paratypes: 2♂, 2♀: same data as holotype (cAss); 3♂, 2♀: "CHINA: S-Gansu [CH12-13], Mts. 36 km SE Longnan, 33°13'03''N, 105°14'55''E, 2080 m, N-slope with mixed pine and birch forest, litter and mushrooms sifted, 4.VIII.2012, leg. M. Schülke" (cSch, cAss); 1♂, 1♀: same data, but "[CH12-13b] ... E-slope with mixed pine and birch forest, litter sifted" (cSch, cAss); 1♀: "CHINA [7] - S-Gansu, mountains SE Longnan, sifted, 33°13'20''N, 105°15'10''E, 2170 m, 31.VII.2012, V. Assing" (ZFMK); 1♂, 3♀: "CHINA: S-Gansu [CH12-

07], Mts. 36 km SE Longnan, 33°13’20’’N, 105°15’10’’E, 2170 m, N-slope with shrubs and scattered coniferous trees, litter & mushrooms sifted, 31.VII.2012, leg. M. Schülke” (cSch); 1♂: “CHINA [8] - S-Gansu, mountains SE Longnan, sifted, 33°11’20’’N, 105°14’24’’E, 2030 m, 31.VII.2012, V. Assing” (cAss); 1♂, 1♀: “CHINA [18] - S-Gansu, mountains SE Longnan, sifted, 33°11’17’’N, 105°14’12’’E, 2060 m, 7.VIII.2012, V. Assing” (cAss); 1♂: “CHINA [18a]- S-Gansu, mts. SE Longnan, nest of *Formica*, 33°11’17’’N, 105°14’12’’E, 2060 m, 7.VIII.2012, V. Assing” (cAss); 2♂, 1♀: “CHINA [18b]- S-Gansu, mountains SE Longnan, sifted, 33°11’16’’N, 105°14’08’’E, 2130 m, 7.VIII.2012, V. Assing” (cAss).

Etymology. The specific epithet (Latin, adjective: sociable) alludes to the fact that this species shares its habitat with *N. longilobatus*.

Description. Body length 4.8–6.0 mm; length of forebody 2.7–3.1 mm. Habitus as in Fig. 15. External characters, including coloration, similar to those of *N. custoditus*. Distinguished only by the male sexual characters.

♂: sternites VI and VII unmodified; sternite VIII (Fig. 11) of similar shape and chaetotaxy as that of *N. custoditus*; aedeagus approximately 0.9 mm long; dorso-lateral apophyses not reaching apex of median lobe (Figs 12–14).

Comparative notes. A distinction of *N. sociabilis* from *N. custoditus* is possible only based on the morphology of the aedeagus, particularly the different shape of the ventral process (broader and shorter, apically acute both in lateral and in ventral view). *Nazeris sociabilis* differs from *N. shaanxiensis* by the relative length of the apophyses (*N. shaanxiensis*: projecting beyond apex of median lobe), and the basally broader ventral process.

Distribution and natural history. The species is known only from a pass in a mountain range to the southeast of Longnan (Fig. 2), where the specimens were sifted from leaf litter, soil, moss, and fern roots beneath shrubs and in mixed forests at altitudes of 2030-2170 m.

Nazeris micangicus sp. n. (Figs 16–21, 38)

Type material. Holotype ♂: “CHINA [28]- S-Shaanxi, Micang Shan, 34 km S Hanzhong, 32°44’22’’N, 106°51’55’’E, 1460 m, 14.VIII.2012, V. Assing / Holotypus ♂ *Nazeris micangicus* sp. n., det. V. Assing 2012” (cAss). Paratypes: 1♂, 1♀: same data as holotype (cAss); 1♂, 1♀ [partly teneral]: “CHINA: S-Shaanxi [CH12-28], Micang Shan, 34 km S Hanzhong, 32°44’22’’N, 106°51’55’’E, 1460 m, W-slope, deciduous forest margin with bamboo, litter, grass, and moss sifted, 14.VIII.2012, leg. M. Schülke” (cSch); 1♂, 1♀ [partly teneral]: “CHINA: S-Shaanxi [CH12-28], Micang Shan, 34 km S Hanzhong, 32°44’22’’N, 106°51’55’’E, 1460 m, W-slope, deciduous forest margin with bamboo, litter, grass, and moss sifted, 14.VIII.2012, leg. M. Schülke” (cSch); 1♂, 1♀ [partly teneral]: “CHINA (S.Shaanxi), Micang Shan, 34 km S Hanzhong, 32°44’22’’N, 106°51’55’’E, 1460 m, W.slope, margin of deciduous forest with bamboo, ferns, litter, roots, soil sifted, 14.VIII.2012 D.W. Wrase [28]” (cAss, ZFMK).

Etymology. The specific epithet is an adjective derived from Micang, the name of the mountain range where the species was discovered.

Description. Body length 5.2–5.8 mm; length of forebody 2.8–3.0 mm. Habitus as in Fig. 16. External characters as in *N. custoditus* (Fig. 7), distinguished only by the male sexual characters.

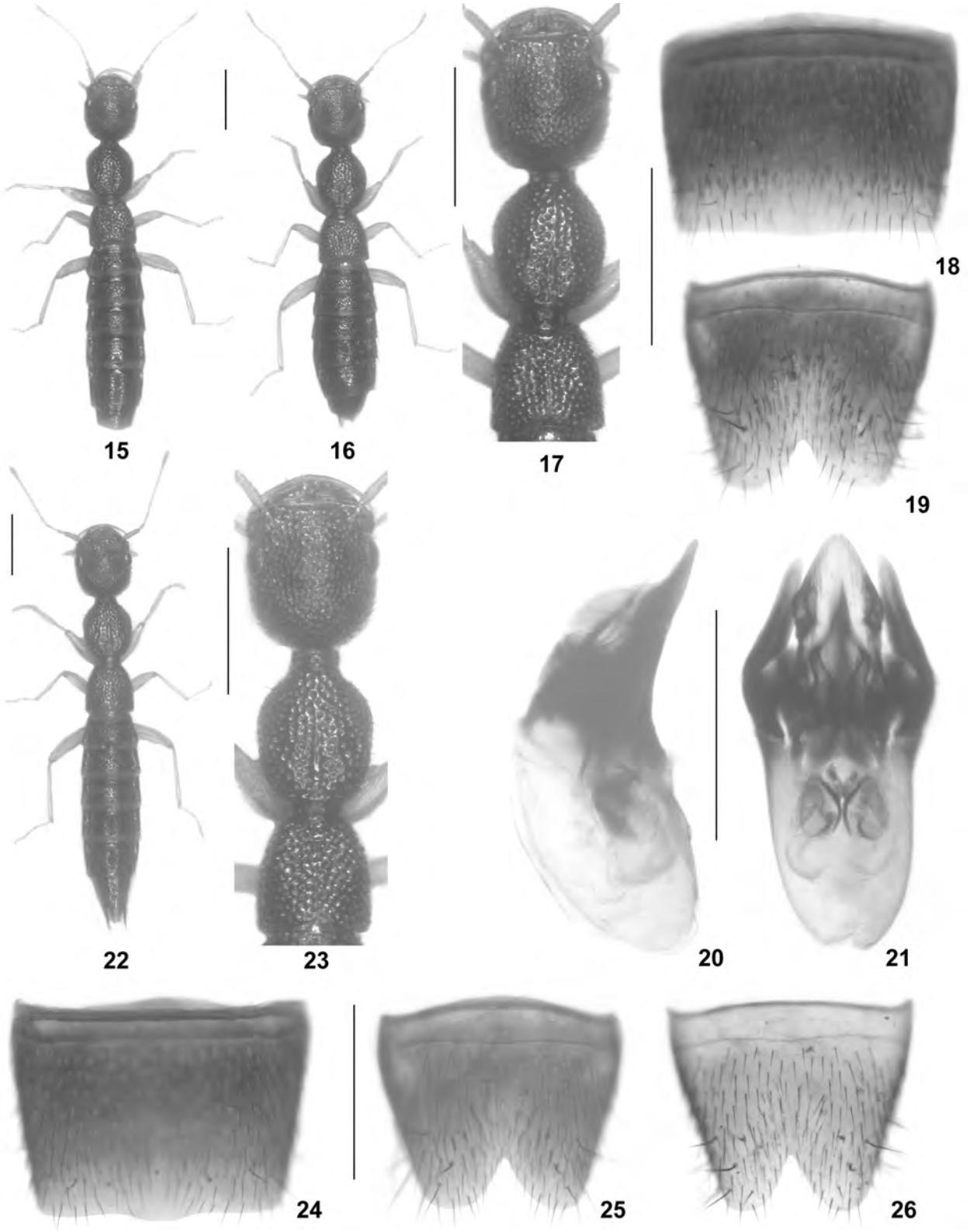
♂: sternite VI unmodified; posterior margin of sternite VII weakly convex in the middle, almost truncate (Fig. 18); sternite VIII with unmodified pubescence, posterior excision V-shaped and moderately deep, its depth nearly 1/4 the length of sternite (Fig. 19); aedeagus approximately 0.85 mm long; dorso-lateral apophyses strongly sclerotized, short, and stout, not reaching apex of median lobe (Figs 20–21).

Comparative notes. Based on the external and male sexual characters, *N. micangicus* is closely allied to *N. shaanxiensis*, *N. custoditus*, and *N. sociabilis*. It is reliably distinguished from them only based on the male sexual characters. It differs from *N. shaanxiensis* particularly by the shorter dorso-lateral apophyses, from *N. custoditus* by on average paler coloration, the broad and slightly deeper posterior excision of the male sternite VIII, and the shape of the median lobe of the aedeagus (shorter and broader in ventral view; apex more acute in ventral and in lateral view), and from *N. sociabilis* by the smaller aedeagus and the more slender and apically more acute ventral process of the median lobe.

Distribution and natural history. The type locality is situated in the Micang Shan some 35 km to the south of Hanzhong in southern Shaanxi (Fig. 38). The specimens were sifted from leaf litter, grass roots, and moss in a deciduous forest with bamboo at an altitude of 1460 m. Some of the paratypes are slightly teneral.

Nazeris dilatatus sp. n. (Figs 2, 22–31)

Type material. Holotype ♂: “CHINA [30] - S-Shaanxi, Micang Shan, 33 km S Hanzhong, 32°44’44’’N, 106°52’46’’E, 1360 m, 15.VIII.2012, V. Assing / Holotypus ♂ *Nazeris dilatatus* sp. n., det. V. Assing 2012” (cAss).



Figs 15–26. *Nazeris sociabilis* (**15**), *N. micangicus* (**16–21**), and *N. dilatatus* (**22–26**). **15–16, 22.** Habitus. **17, 23.** Forebody. **18, 24.** Male sternite VII. **19, 25–26.** Male sternite VIII. **20–21.** Aedeagus in lateral and in ventral view. Scale bars: 15–17, 22–23: 1.0 mm; 18–21, 24–26: 0.5 mm.

Paratypes: 2♂: same data as holotype (cAss); 2♂, 3♀ [partly teneral]: "CHINA [27a]-S-Shaanxi [recte: N-Sichuan], Micang Shan, 42 km S Hanzhong, 32°40'52''N, 106°49'16''E, 1090 m, 14.VIII.2012, V. Assing" (cAss); 2♂, 2♀ [partly teneral]: "CHINA: S-Shaanxi [CH12-30], Micang Shan, 33 km S Hanzhong, 32°44'44''N, 106°52'46''E, 1360 m, stream valley, forest margin, litter and soil sifted, 15.VIII.2012, M. Schülke" (cSch); 2♂: "CHINA (S.Shaanxi) Micang Shan, 33 km S Hanzhong, 32°44'44''N, 106°52'46''E, 1360 m, (stream valley, shady brookside with bamboo, decidious [sic] shrubs, litter, moss, soil sifted) 15.VIII.2012 D.W. Wrase [30B]" (cAss); 1♂, 1♀: "CHINA: S-Shaanxi [recte: N-Sichuan] [CH12-27], Micang Shan, 42 km S Hanzhong, 32°40'52''N, 106°49'16''E, 1090 m, NW-slope, mixed forest margin with rocks, litter, grass, and moss sifted, 14.VIII.2012, leg. M. Schülke" (cSch); 3♂, 1♀: "CHINA [29] - S-Shaanxi, Micang Shan, 30 km S Hanzhong, 32°45'56''N, 106°53'57''E, 1070 m, 15.VIII.2012, V. Assing" (cAss, ZFMK); 1♂: "CHINA: S-Shaanxi [CH12-29], Micang Shan, 30 km S Hanzhong, 32°45'56''N, 106°53'57''E, 1070 m, stream valley, litter and soil sifted, 15.VIII.2012, leg. M. Schülke" (cSch); 1♀: "CHINA (S.Shaanxi) Micang Shan, 30 km S Hanzhong, 1070 m, 32°45'56''N, 106°53'57''E, (stream valley, litter, soil sifted) 15.VIII.2012 D.W. Wrase [29]" (cSch); 2♂ [teneral]: "CHINA [32] - S-Shaanxi [recte: N-Sichuan], Micang Shan, 42 km S Hanzhong, 32°40'43''N, 106°48'33''E, 1090 m, 17.VIII.2012, V. Assing" (cAss); 1♂, 2♀ [partly teneral]: "CHINA: S-Shaanxi [recte: N-Sichuan] [CH12-32], Micang Shan, 42 km S Hanzhong, 32°40'43''N, 106°48'33''E, 1090 m, stream valley, shady S-slope, sec. mixed forest, litter, grass, and herbs near path sifted, 17.VIII.2012, M. Schülke" (cSch); 1♂, 1♀ [♀ teneral]: "CHINA: S-Shaanxi [CH12-31], Micang Shan, 40 km SW Hanzhong, 32°52'25''N, 106°37'11''E, 1530 m, N-slope, mixed secondary forest, litter and moss sifted, 16.VIII.2012, leg. M. Schülke" (cSch, cAss); 1♂: "CHINA (S-Shaanxi) Micang Shan, 40 km SW Hanzhong, 1530 m, 32°52'25''N, 106°37'11''E (N.slope, mixed secondary forest, litter, moss sifted) 16.VIII.2012 D.W. Wrase [31]" (cSch); 10♂, 7♀ [identified by J.-Y. Hu]: "China: Sichuan Prov., Bazhong City, Nanjiang Coun., Micangshan, N32.39.825 E107.01.788, alt. 1800 m, 27~28-IV-2008, Huang Hao & Xu Wang leg." (SNUC).

Comment. The data for the paratypes deposited in the SNUC were communicated to me by J.-Y. Hu. His identification was confirmed based on photographs of the male primary and secondary sexual characters.

Etymology. The specific epithet (Latin adjective: dilated) refers to the characteristic shape of the ventral process of the aedeagus.

Description. Body length 5.5-6.5 mm; length of forebody 2.8–3.2 mm. Habitus as in Fig. 22. Coloration: forebody in mature specimens uniformly dark-brown to blackish brown; abdomen blackish; legs and antennae yellowish. Other external characters (Fig. 23) as in *N. custoditus*.

♂: sternite VI unmodified; posterior margin of sternite VII convexly produced in the middle (Fig. 24); sternite VIII with unmodified pubescence, posterior excision broadly V-shaped and rather deep, its depth nearly 1/3 the length of sternite (Figs 25–26); aedeagus approximately 0.85 mm long, median lobe with distinct lateral projections and apically acute in ventral view; dorso-lateral apophyses not reaching apex of median lobe, apically obliquely truncate and with small tooth-like projection directed towards median lobe (Figs 27–31).

Intraspecific variation. The shape of the ventral process of the aedeagus (lateral view) and of the posterior margin of the male sternite VII are slightly variable (Figs 25–28).

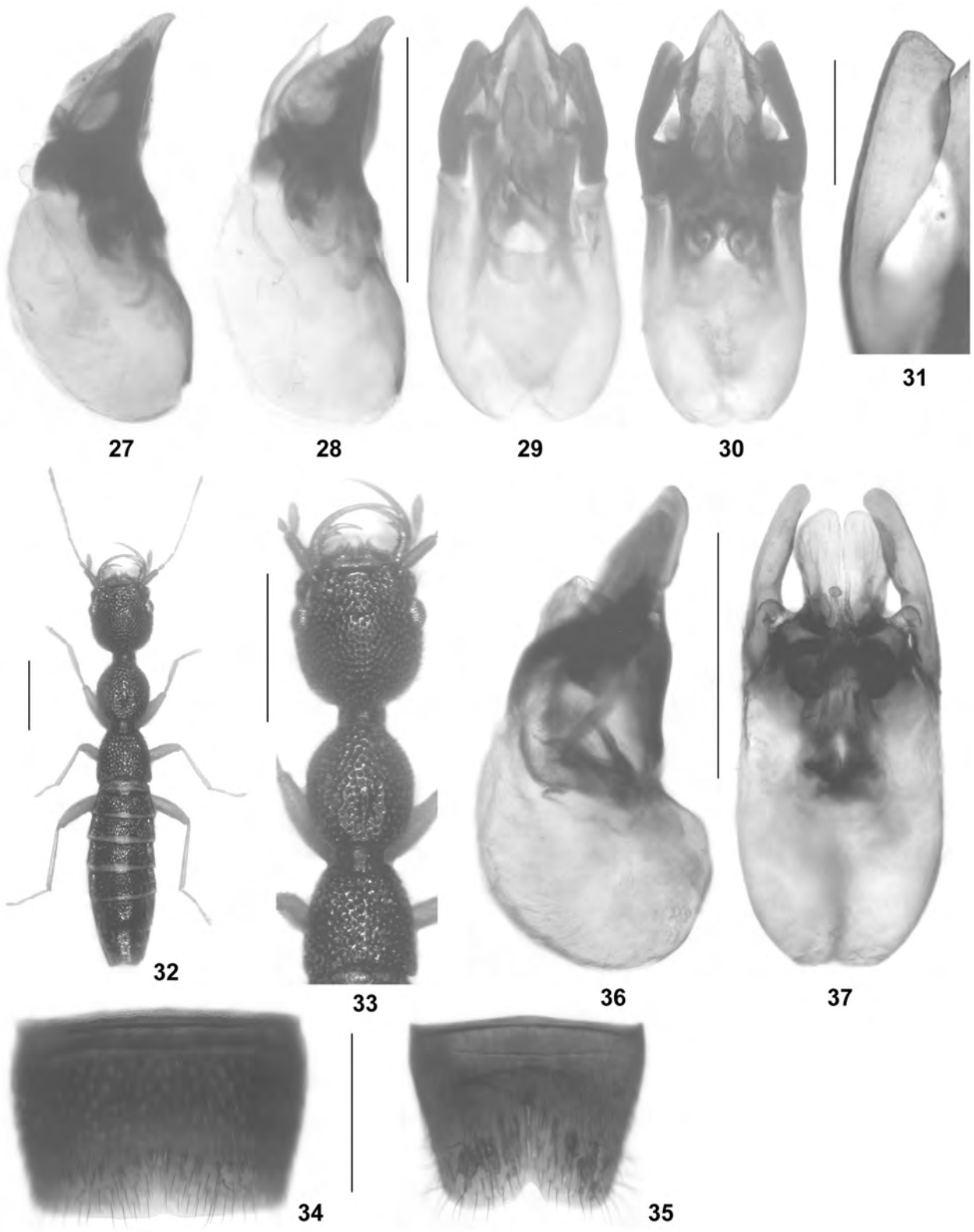
Comparative notes. *Nazeris dilatatus* is readily distinguished from other geographically close congeners by the conspicuous shape of the posterior margin of the male sternite VII, as well as by the characteristic shapes of the ventral process and of the dorso-lateral apophyses of the aedeagus, from most species also by the deeper posterior excision of the male sternite VIII.

Distribution and natural history. The species was found in several localities in the Micang Shan to the south of Hanzhong in southern Shaanxi and in northern Sichuan (Fig. 2). The specimens from Sichuan were collected in mixed forests by sifting leaf litter and moss, and in vegetation composed of perennial herbs by shaking roots and scraping the soil. The altitudes range from 1070 to 1800 m. Several paratypes are teneral.

The *Nazeris parvincisus* species group

***Nazeris parvincisus* sp. n.** (Figs 2, 32–37)

Type material. Holotype ♂: "CHINA: S-Shaanxi (Daba Shan), SE pass, 22 km NW Zhenping, 32°00'N, 109°21'E, 1930 m, 11.VII.2001, leg. M. Schülke [C01-10] / mixed deciduous forest (sifted) [C01-10] / Holotypus ♂ *Nazeris parvincisus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 1♂: same data as holotype (cAss); 1♂: "CHINA: Border Shaanxi - Sichuan [now Chongqing] (Daba Shan), pass 20 km SSE Zhenping, 1700-1800 m, 31°44'N, 109°35'E, 12.VII.2001, leg. M. Schülke [C01-07C] / mixed forest, small creek valley, moss, bark (sifted) [C01-07C]" (cSch).



Figs 27–37. *Nazeris dilatatus* (**27–31**) and *N. parvincisus* (**32–37**). **27–30, 36–37.** Aedeagus in lateral and in ventral view. **31.** Dorso-lateral apophysis of aedeagus in ventral view. **32.** Habitus. **33.** Forebody. **34.** Male sternite VII. **35.** Male sternite VIII. Scale bars: 32–33: 1.0 mm; 27–30, 34–37: 0.5 mm; 31: 0.1 mm.

Etymology. The specific epithet (Latin, adject.: with small incision) refers to the shape of the male sternite VIII.

Description. Body length 5.5–6.0 mm; length of forebody 2.9–3.0 mm. Habitus as in Fig. 32. Coloration: body blackish-brown to black; legs and antennae yellowish.

Head (Fig. 33) weakly oblong, approximately 1.05 times as long as broad; punctation coarse, dense, and not areolate; interstices without microsculpture; eyes relatively small, but strongly convex, approximately 1/4 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna approximately 1.8–2.0 mm long.

Pronotum (Fig. 33) approximately 1.15 times as long as broad and approximately 0.8 times as broad as head; punctation non-areolate and dense, distinctly coarser than that of head; interstices glossy, forming narrow ridges; midline with short impunctate elevation in posterior half.

Elytra (Fig. 33) approximately 0.6 times as long as pronotum; humeral angles obsolete; punctation dense, defined, and coarse; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.2 times as broad as elytra; punctation dense, defined, and rather coarse, not distinctly sparser on tergite VI than on tergite IV; tergites VII and VIII with sparser and finer punctation than tergites III-VI; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; posterior margin of sternite VII with small and indistinct concavity in the middle (Fig. 34); sternite VIII with unmodified pubescence, posterior excision small (though somewhat variable), its depth only 0.10–0.15 times the length of sternite (Fig. 35); aedeagus stout, approximately 0.85 mm long; ventral process apically convex and with deep median incision in ventral view; dorso-lateral apophyses short, curved, stout, slightly projecting beyond apex of ventral process (Figs 36–37).

Comparative notes. *Nazeris parvincisus* is distinguished from the syntopic *N. extensus* by the darker coloration, the less coarse punctation of the head, the denser punctation of the head and pronotum, the less uneven surface of the posterior proportion of the pronotum, the longer antennae, the denser and coarser punctation of the abdominal tergite VI, the different shape of the male sternite VIII, and by the completely different morphology of the aedeagus.

Distribution and natural history. The species was found in two localities in the Daba Shan, to the northwest and south-southeast of Zhenping, in southern Shaanxi and in the border region between Shaanxi and Chongqing. The specimens were sifted from leaf litter and moss in mixed forests at altitudes 1700–1930 m, partly together with *N. extensus, N. compressus, and/or N. angulatus*.

The *Nazeris longilobatus* species group

***Nazeris longilobatus* sp. n.** (Figs 38–46)

Type material. Holotype ♂: "CHINA [18b]- S-Gansu, mountains SE Longnan, sifted, 33°11'16''N, 105°14'08''E, 2130 m, 7.VIII.2012, V. Assing / Holotypus ♂ *Nazeris longilobatus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 1♀: same data as holotype (cAss); 2♀: "CHINA (S.Gansu), Mts. 38 km SE Longnan, 2130 m, 33°11'16''N, 105°14'08''E, (W.slope with scree, scrubs, trees, litter, soil, moss sifted) 7.VIII.2012 D.W. Wrase [18B]" (cSch); 2♂, 1♀: "CHINA [18] - S-Gansu, mountains SE Longnan, sifted, 33°11'17''N, 105°14'12''E, 2060 m, 7.VIII.2012, V. Assing" (cAss).

Etymology. The specific epithet is composed of the Latin adjectives longus (long) and lobatus (lobed) and alludes to the elongated dorso-lateral apophyses of the aedeagus.

Description. Body length 5.5–6.5 mm; length of forebody 3.0–3.2 mm. Habitus as in Fig. 39. Coloration: body in mature specimens uniformly blackish; legs and antennae yellowish.

Head (Fig. 40) approximately as long as broad; punctation dense and areolate; interstices without microsculpture, reduced to narrow ridges; eyes of moderate size and distinctly convex, at least slightly less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna 1.7–2.0 mm long.

Pronotum (Fig. 40) 1.10–1.14 times as long as broad and approximately 0.85 times as broad as head; punctation non-areolate, distinctly coarser than that of head, dense but less so than that of head; interstices narrower than diameter of punctures, glossy; impunctate midline narrow, mostly of more or less reduced length and sometimes present only in posterior half.

Elytra (Fig. 40) approximately 0.7 times as long as pronotum, or nearly so; humeral angles obsolete; punctation dense, defined, and coarse, nearly as coarse as that of pronotum; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.25 times as broad as elytra; punctation dense, defined, and relatively coarse on anterior tergites (Fig. 41), only slightly less dense and somewhat finer on posterior tergites (Fig. 42); interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; sternite VII (Fig. 43) shallowly depressed in the middle; sternite VIII with unmodified pubescence, posterior excision narrowly V-shaped and moderately deep, its depth nearly 0.3 times as long as the sternite (Fig. 44); aedeagus approximately 0.9 mm long; dorso-lateral apophyses long, distinctly curved in

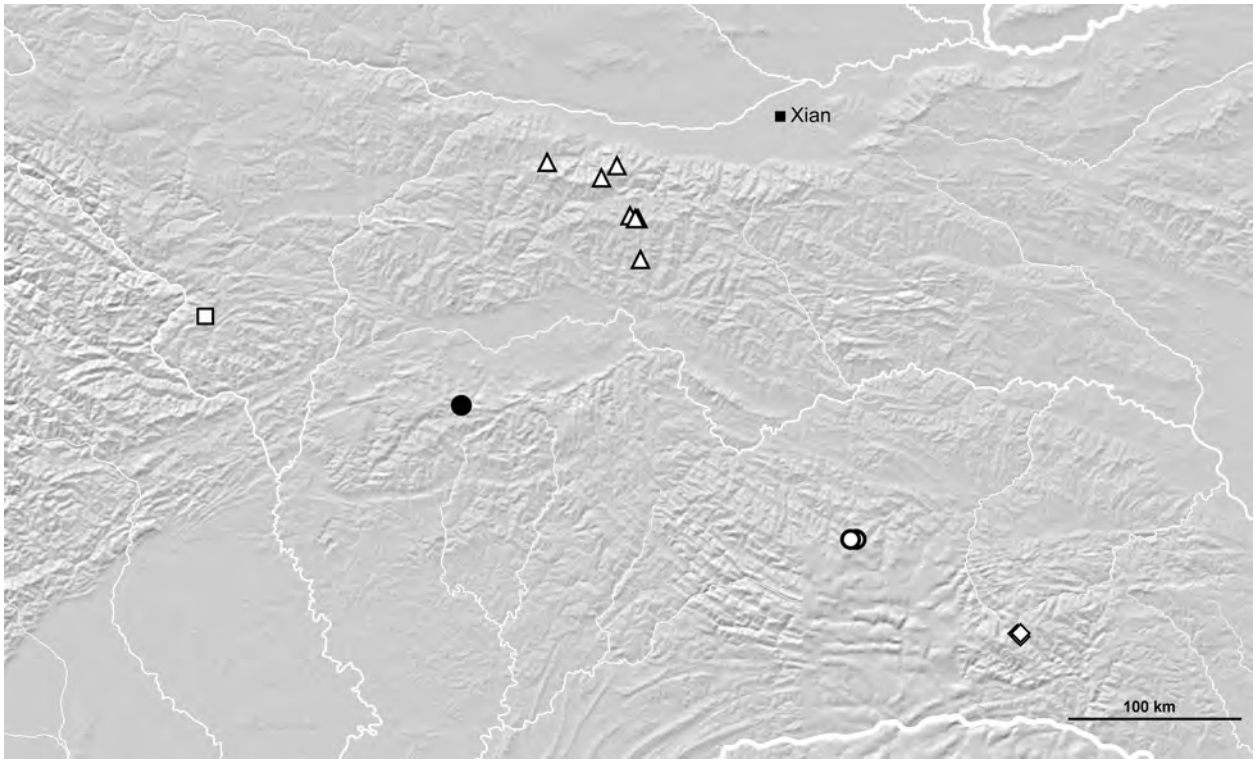


Fig. 38. Distributions of species of the *N. longilobatus* group (open symbols) and of the *N. shaanxiensis* group (filled symbol): *N. longilobatus* (open square); *N. huanghaoi* (open triangles); *N. bisinuosus* (open circles); *N. rectus* (open diamonds); *N. micangicus* (filled circle).

ventral view, and nearly reaching apex of median lobe (Figs 45–46).

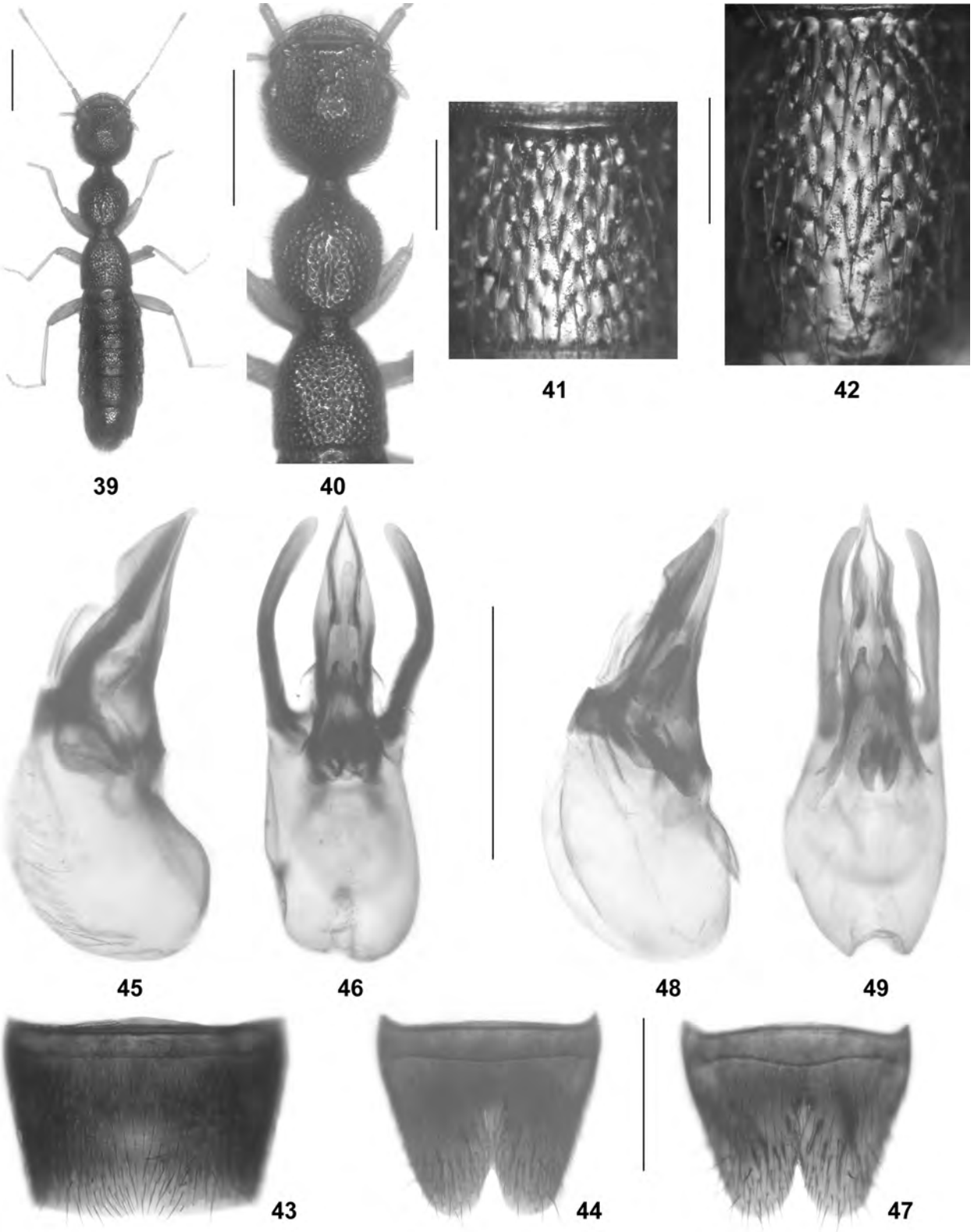
Comparative notes. This species is distinguished from the syntopic *N. sociabilis* by the darker coloration, on average larger body size, the broader head, the on average less oblong and posteriorly more strongly tapering pronotum, noticeably longer elytra, denser and more defined punctation on the abdomen (particularly noticeable on tergites VI and VII), the deeper and narrower posterior excision of the male sternite VIII, and by the much more slender median lobe of the aedeagus with much longer and more slender dorso-lateral apophyses. Based on the male sexual characters, *N. longilobatus* is closely related to *N. huanghaoi* from the environs of the Taibai Shan. It differs from this species by slightly larger size, the larger head, the more densely and less glossy abdomen, the less deep posterior excision of the male sternite VIII, by the different shape of the ventral process of the aedeagus, as well as by the distinctly bent dorso-lateral apophyses. For illustrations of *N. huanghaoi* see Hu et al. (2010) and Figs 47–49.

Distribution and natural history. The species is known only from one slope near a pass in a mountain range to the southeast of Longnan (Fig. 38). The specimens were sifted from leaf litter, soil, and moss beneath shrubs at altitudes of 2060 and 2130 m, together with *N. sociabilis*.

***Nazeris huanghaoi* Hu & Li, 2010** (Figs 38, 47–49)

Type material examined. Paratypes: 1♂, 1♀: "Daoban, Zhouzhi County, Shaanxi Prov., N 38.43.645 E 107.58.147 / alt. 1900 m, 4-V-2008, HUANG Hao & XU Wang leg. / [Paratype] *Nazeris huanghaoi* HU & LI, 2010, SHNU Collections" (cAss).

Additional material examined. China, S-Shaanxi: 1♂, 42 km SW Meixian, 34°02'N, 107°24'E, 1875 m, secondary deciduous forest near stream, litter an grass roots sifted, 24.VII.2012, leg. Schülke (cAss); 2♂, Qinling Shan, 108 km SW Xi'an, road km 93 S Zhouzhi, 33°45'N, 107°56'E, mountain forest, sifted, 1650 m, 1.–2.IX.1995, leg. Schülke (cSch); 3♂, 3♀, Qinling Shan, pass on road Zhouzhi-Foping, 105 km SW Xi'an, 33°44'N, 107°59'E, 1990 m, N-slope, small creek valley, mixed deciduous forest with bamboo, 2.&4.VII.2001, leg. Schülke (cSch, cAss); 2♂, 5♀, same data, but 33°44'N, 107°58'E, 1880 m, base of rocks, sifted, 4.VII.2001, leg. Schülke (cSch, cAss).



Figs 39–49. *Nazeris longilobatus* (**39–46**) and *N. huanghaoi*, paratype (**47–49**). **39.** Habitus. **40.** Forebody. **41.** Median portion of abdominal tergite IV. **42.** Median portion of abdominal tergite VII. **43.** Male sternite VII. **44, 47.** Male sternite VIII. **45–46, 48–49.** Aedeagus in lateral and in ventral view. Scale bars: 39–40: 1.0 mm; 43–49: 0.5 mm; 41–42: 0.2 mm.

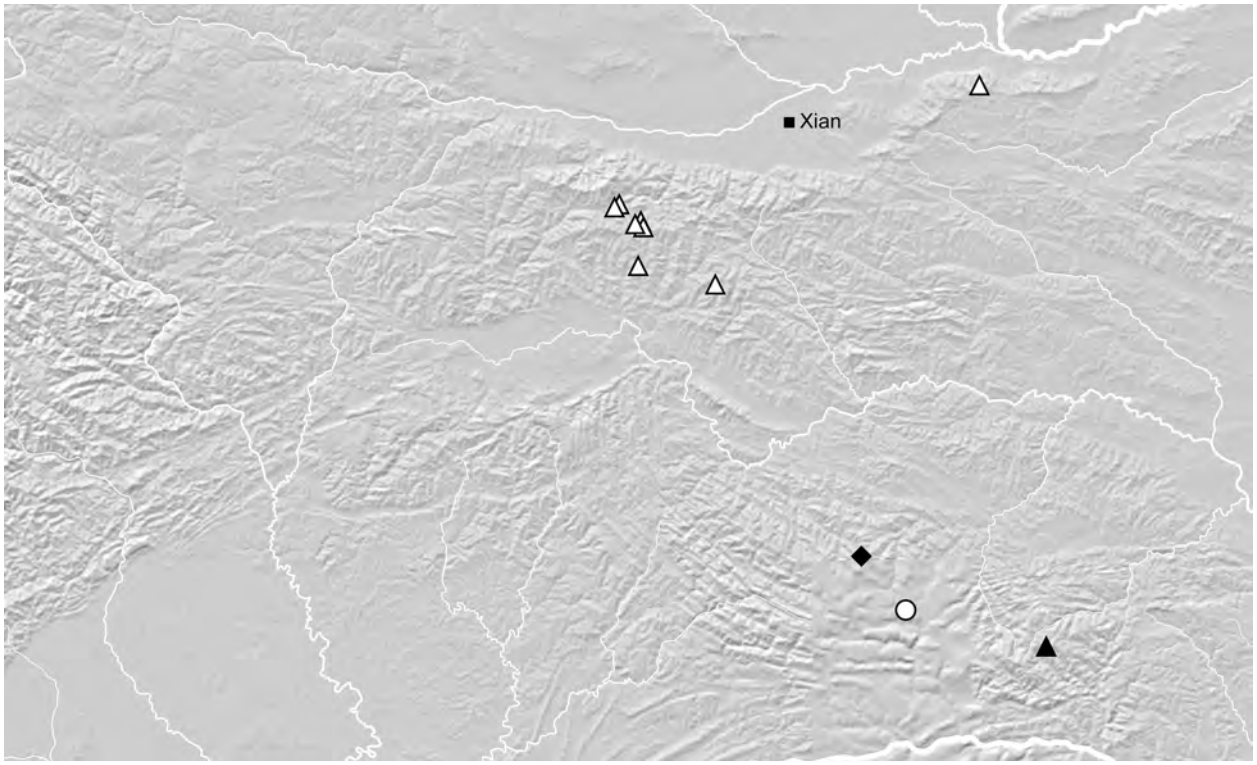


Fig. 50. Distributions of species of the *N. longilobatus* group (filled symbols) and of the *N. cultellatus* group (open symbols): *N. acutus* (filled diamond); *N. clavatus* (filled triangle); *N. cultellatus* (open triangles; records from Henan and Anhui not shown); *N. compressus* (open circle).

Diagnosis. *Nazeris huanghaoi* is most similar to *N. longilobatus* (see description above), but differs by slightly shorter elytra (approximately 0.65 times as long as pronotum), the sparser punctation of the posterior abdominal tergites, the deeper and narrower posterior excision of the male sternite VIII (Fig. 47), and by the morphology of the aedeagus, particularly the less curved dorso-lateral apophyses (Figs 48–49).

Distribution and natural history. The species is endemic to the environs of the Taibai Shan in the Qinling Shan (Fig. 38), where it was collected in deciduous forests at elevations from approximately 1400 m up to 2065 m (Hu et al. 2010; material examined), in some localities together with *N. shaanxiensis* and/or *N. cultellatus*.

Nazeris acutus sp. n. (Figs 50–55)

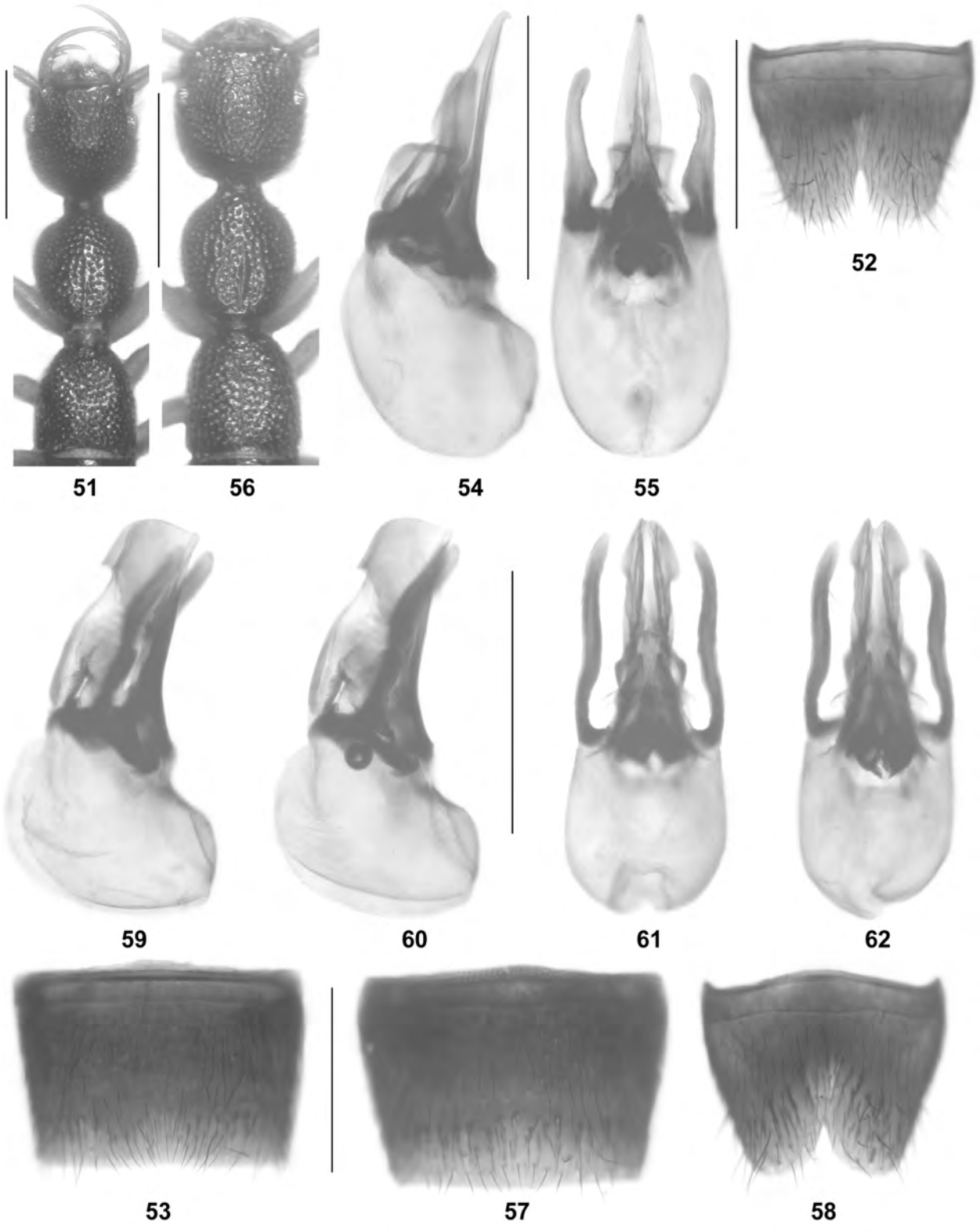
Type material. Holotype ♂: "CHINA: S-Shaanxi (Daba Shan), NW pass 25 km NW Zhenping, 32°01'N, 109°19'E, 2150 m, 11.VII.2001, leg. M. Schülke [C01-09] / creek valley, young coniferous forest, moss (sifted) [C01-09] / Holotypus ♂ *Nazeris acutus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 3♂, 1♀: same data as holotype (cSch, cAss); 1♀: "CHINA (S-Shaanxi) Daba Shan, NW pass 25 km NW Zhenping, 32°01'N, 109°19'E, 2150 m (creek vall., young coniferous forest, moss) 11.VII.2001 Wrase [09]" (cSch).

Etymology. The specific epithet (Latin, adjective) refers to the conspicuously acute ventral process of the aedeagus.

Description. Small species; body length 4.3–5.7 mm; length of forebody 2.5–2.8 mm. Coloration: forebody brown to blackish-brown; abdomen dark-brown to black; legs and antennae yellowish.

Head (Fig. 51) weakly oblong, approximately 1.05 times as long as broad; punctation coarse, dense, and distinctly areolate; interstices without microsculpture, forming narrow ridges; eyes of moderate size and distinctly convex, less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna approximately 1.4–1.5 mm long.

Pronotum (Fig. 51) 1.10–1.15 times as long as broad and approximately 0.9 times as broad as head; punctation coarse, non-areolate and dense; interstices much narrower than diameter of punctures, glossy; surface in posterior median and lateral portions somewhat uneven, midline and usually additional lateral patches impunctate (or more sparsely punctate) and somewhat elevated.



Figs 51–62. *Nazeris acutus* (**51–55**) and *N. bisinuosus* (**56–62**). **51, 56.** Forebody. **53, 57.** Male sternite VII. **52, 58.** Male sternite VIII. **54–55, 59–62.** Aedeagus in lateral and in ventral view. Scale bars: 51, 56: 1.0 mm; 52–55, 57–62: 0.5 mm.

Elytra (Fig. 51) approximately 0.65 times as long as pronotum; humeral angles obsolete; punctation dense, moderately defined, and moderately coarse, distinctly less so than that of pronotum; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.25 times as broad as elytra; punctation dense, defined, and not very coarse on tergites III-VI, somewhat sparser on tergite VI than on tergite IV; punctation of tergites VII and VIII sparser and finer than that of anterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; sternite VII not distinctly modified (Fig. 52); sternite VIII with unmodified pubescence, posterior excision narrow and rather deep, its depth approximately 0.3 times the length of sternite (Fig. 53); aedeagus approximately 0.85 mm long; ventral process conspicuously slender and acute both in lateral and in ventral view; dorso-lateral apophyses short and stout, much shorter than ventral process (Figs 54–55).

Comparative notes. Based on the similar external characters (punctation both of the forebody and of the abdomen, body proportions) and particularly the similar male sexual characters (sternite VIII with narrow and deep posterior excision; aedeagus with slender and apically very acute ventral process), *N. acutus* is allied to *N. longilobatus* and related species. It is distinguished from the syntopic and highly similar *N. bisinuosus* by the distinctly denser punctation of the posterior tergites (that of tergite VI approximately as dense as that of tergite IV), by the deeper posterior excision of the male sternite VIII, as well as by the shorter and differently shaped dorso-lateral apophyses and the differently shaped ventral process of the aedeagus.

Distribution and natural history. The type locality is situated in the Daba Shan, to the northwest of Zhenping, in southern Shaanxi (Fig. 50). The specimens were sifted from moss in a young coniferous forest at an altitude of 2150 m, together with *N. bisinuosus*.

Nazeris bisinuosus sp. n. (Figs 38, 56–62)

Type material. Holotype ♂: "CHINA: S-Shaanxi (Daba Shan), mountain range N pass 22 km NW Zhenping, N-slope, 32°01'N, 109°21'E, 2400 m, 13.VII.2001, leg. M. Schülke [C01-11] / mixed forest (Pinus Salix and other deciduous trees) (sifted) [C01-11] / Holotypus ♂ *Nazeris bisinuosus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 8♂, 12♀: same data as holotype (cSch, cAss); 1♂, 1♀: "CHINA (S-Shaanxi) Daba Shan, mount. range N pass 22 km NW Zhenping, N-slope, 2400 m, 32°01'N, 109°21'E, (mix. for., Pinus, Salix a. other decid. trees) 13.VII.2001 Wrase [11]" (cSch, ZFMK); 1♂: "CHINA: S-Shaanxi (Daba Shan), NW pass 25 km NW Zhenping, 32°01'N, 109°19'E, 2150 m, 11.VII.2001, leg. M. Schülke [C01-09] / creek valley, young forest, moss (sifted) [C01-09]" (cAss); 1♀: "CHINA (S-Shaanxi) Daba Shan, NW pass 25 km NW Zhenping, 32°01'N, 109°19'E, 2150 m (creek vall., young coniferous forest, moss) 11.VII.2001 Wrase [09]" (cSch).

Etymology. The specific epithet (Latin, adjective) refers to the bisinuate dorso-lateral apophyses of the aedeagus.

Description. Rather small species; body length 4.5–5.5 mm; length of forebody 2.5–2.8 mm. Coloration: body in mature specimens uniformly blackish; legs and antennae yellowish.

Head (Fig. 56) 1.00–1.05 times as long as broad; punctation dense and areolate; interstices without microsculpture, reduced to narrow ridges; eyes of moderate size and distinctly convex, less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna 1.4–1.6 mm long.

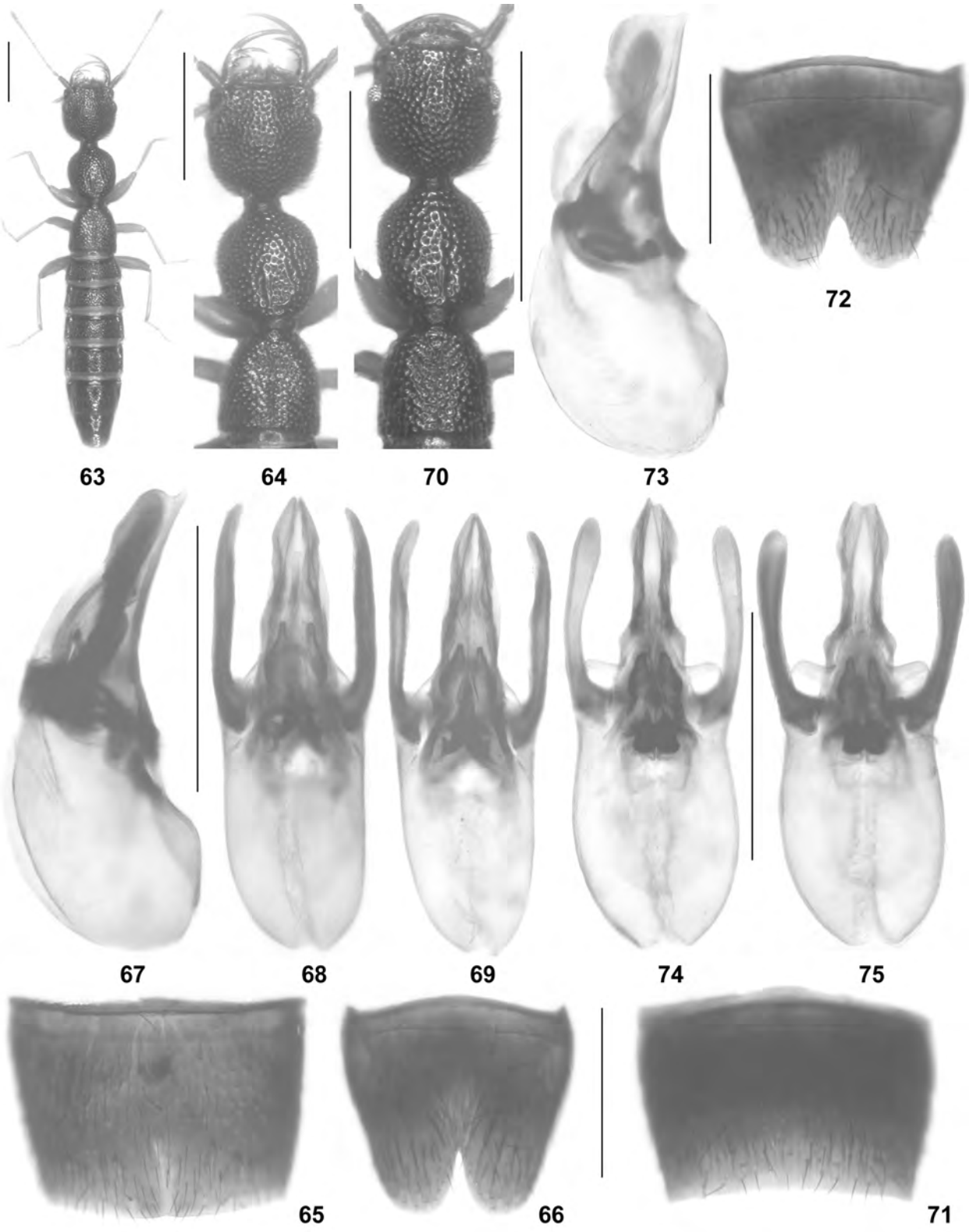
Pronotum (Fig. 56) 1.10–1.15 times as long as broad and approximately 0.85–0.90 times as broad as head; punctation non-areolate and dense; interstices narrower than diameter of punctures, glossy; midline with usually short and somewhat elevated longitudinal impunctate band in posterior half.

Elytra (Fig. 56) approximately 0.60–0.65 times as long as pronotum; humeral angles obsolete; punctation dense, defined, and coarse; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.25 times as broad as elytra; punctation dense, defined, and relatively coarse on anterior tergites, less dense and finer on posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; sternite VII not distinctly modified (Fig. 57); sternite VIII with unmodified pubescence, posterior excision narrowly V-shaped and moderately deep, its depth nearly 0.25 times as long as the sternite (Fig. 58); aedeagus small, approximately 0.7 mm long; dorso-lateral apophyses long, bisinuate in ventral view; ventral process apically acute in ventral view and of characteristic shape in lateral view (Figs 59–62).

Comparative notes. Based on the external (black coloration, similar punctation) and sexual characters (shape of male sternite VIII; aedeagus with long and slender dorso-lateral apohyses and ventral process), *N. bisinuosus* is allied to *N. longilobatus*, *N. huanghaoi*, and particularly *N. acutus*. It is distinguished from them by the sparser punctation of the posterior abdominal tergites, as well as



Figs 63–75. *Nazeris rectus* (**63–69**) and *N. clavatus* (**70–75**). **63.** Habitus. **64, 70.** Forebody. **65, 71.** Male sternite VII. **66, 72.** Male sternite VIII. **67–69, 73–75.** Aedeagus in lateral and in ventral view. Scale bars: 63–64, 70: 1.0 mm; 65–69, 71–75: 0.5 mm.

by the distinctly bisinuate dorso-lateral apophyses and by the characteristic shape of the ventral process of the smaller aedeagus, from *N. huanghaoi* and *N. longilobatus* additionally by shorter elytra, and much shorter antennae.

Distribution and natural history. The species was found in two localities in the Daba Shan, to the northwest of Zhenping, in southern Shaanxi (Fig. 38). The specimens were sifted from leaf litter and moss in a mixed forest and in a young coniferous forest at elevations of 2150 and 2400 m, in one locality together with *N. acutus*.

***Nazeris rectus* sp. n.** (Figs 38, 63–69)

Type material. Holotype ♂: "China (W-Hubei) Daba Shan, pass E Mt. Da Shennongjia, 12 km NW Muyuping 31°30'N, 110°21'E 1950 m (dry creek vall., mix. decid. forest) 16.-22.VII.2001 Wrase [13] / Holotypus ♂ *Nazeris rectus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 5♂, 7♀ [1♀ teneral]: same data as holotype (cSch, cAss); 7♂, 3♀: "CHINA: W-Hubei (Daba Shan), pass E of Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N, 110°21'E, 22.VII.2001, leg. M. Schülke [C01-13E] / creek valley, 1950-2050 m, mixed deciduous forest, moss, dead wood, mushrooms (sifted) [C01-13E]" (cSch, cAss); 7♂, 3♀: "CHINA: W-Hubei (Daba Shan), pass E of Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N, 110°21'E, 19.VII.2001, leg. M. Schülke [C01-13C] / creek valley, 1950–2050 m, mixed deciduous forest, moss, dead wood, mushrooms (sifted) [C01-13C]" (cSch, cAss); 2♂, 7♀ [1♀ teneral]: "CHINA: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1550-1650 m, 18.VII.2001, leg. M. Schülke [C01-16A] / creek valley, deciduous forest, moss (sifted) [C01-16A]" (cSch, cAss, ZFMK); 4♂, 2♀: "CHINA: W-Hubei (Daba Shan), creek valley 11 km NW Muyuping, 31°30'N, 110°22'E, 1960 m, 18.VII.2001, leg. M. Schülke [C01-17] / creek valley, mixed deciduous forest (sifted) [C01-17]" (cSch, cAss); 2♂, 2♀: "CHINA (W-Hubei) Daba Shan), creek vall. 11 km NW Muyuping, 31°30'N, 110°22'E, 1960 m (creek vall., mix. decid. for., moss, leaves-sift.) 18.VII.2001 Wrase [17]" (cSch, cAss); 1♂ [identified by J.-Y. Hu]: "China: Hubei Prov., Shennongjia N. R., Xiaolongtan, 5-VIII-2002, Li & Tang leg." (SNUC).

Comment. The data for the paratype deposited in the SNUC were communicated to me by J.-Y. Hu. His identification was confirmed based on photographs of the male primary and secondary sexual characters.

Etymology. The specific epithet (Latin, adjective: straight) refers to the shape of the dorso-lateral apophyses of the aedeagus, one of the characters distinguishing this species from the closely related *N. bisinuosus*.

Description. Body length 5.5–6.7 mm; length of forebody 2.9–3.2 mm. Habitus as in Fig. 63. Coloration: body blackish; legs and antennae dark-yellowish.

Head (Fig. 64) approximately as long as broad; punctation coarse, dense, and non-areolate; interstices without microsculpture, forming narrow ridges; eyes of moderate size and distinctly convex, less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna approximately 1.5–1.7 mm long.

Pronotum (Fig. 64) 1.12–1.17 times as long as broad and approximately 0.85 times as broad as head; punctation non-areolate and dense, slightly coarser than that of head; interstices glossy, forming narrow ridges; in posterior half with more or less pronounced, short impunctate median band, laterally often with more or less irregular, more sparsely punctate areas.

Elytra (Fig. 64) approximately 0.65 times as long as pronotum; humeral angles obsolete; punctation dense, moderately defined, and coarse, but less than that of pronotum; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.2 times as broad as elytra; punctation dense, defined, and rather coarse on tergites III-V, only slightly sparser on tergite VI than on tergite IV, distinctly sparser and finer on tergites VII and VIII than on anterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; sternite VII in the middle of posterior margin indistinctly concave (Fig. 65); sternite VIII with unmodified pubescence, posterior excision narrow and rather deep, its depth approximately 0.3 times the length of sternite (Fig. 66); aedeagus slender, 0.80–0.85 mm long; ventral process slender and acute in lateral view; dorso-lateral apophyses long and almost straight, nearly reaching apex of ventral process (Figs 67–69).

Comparative notes. Based on the male sexual characters (deep and narrow posterior incision of sternite VIII, morphology of the aedeagus), *N. rectus* belongs to the *N. longilobatus* group. It is distinguished from other species of this group particularly by the non-areolate punctation of the head, which it shares only with *N. clavatus*, and by the shape of the dorso-lateral apophyses of the aedeagus. It differs from the syntopic *N. angulatus* by the denser and less coarse punctation of the forebody, the non-areolate punctation of the broader head, darker coloration, denser punctation of the abdomen, and by the completely different male sexual characters.

Distribution and natural history. The species was found in three localities to the northwest of Muyuping in the eastern Daba Shan, western Hubei (Fig. 38). The specimens were sifted from leaf litter and moss in mixed deciduous forests at altitudes of 1550–2050 m, together with *N. angulatus*. Two of the paratypes are teneral.

***Nazeris clavatus* sp. n.** (Figs 50, 70–75)

Type material. Holotype ♂: "CHINA: W-Hubei (Daba Shan), mountain range NE Muyuping, pass 12 km N Muyuping, 31°32'N, 110°26'E, 2380, leg. M. Schülke [C01-15] / 17.VII.2001, N pass, N-slope with young deciduous forest, bank of small creek, moss (sifted) [C01-15] / Holotypus ♂ *Nazeris clavatus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 9♂, 8♀: same data as holotype (cSch, cAss); 3♂, 4♀: same data, but "[C01-15C] ... 21.VII.2001" (cSch, cAss, ZFMK).

Etymology. The specific epithet (Latin, adjective) refers to the club-shaped dorso-lateral apophyses of the aedeagus.

Description. Body length 3.5–5.5 mm; length of forebody 2.5–2.8 mm. Coloration: body blackish, abdominal segments IX-X and posterior margin of segment VIII reddish; legs and antennae dark-yellowish.

Head (Fig. 70) approximately as long as broad; punctation coarse, dense, and non-areolate; interstices without microsculpture, forming narrow ridges; eyes of moderate size and distinctly convex, less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna approximately 1.5 mm long.

Pronotum (Fig. 70) 1.10–1.15 times as long as broad and 0.85–0.90 times as broad as head; punctation non-areolate and dense, slightly coarser than that of head; interstices glossy, forming narrow ridges; in posterior half with more or less pronounced impunctate median band, laterally often with more or less irregular, more sparsely punctate areas.

Elytra (Fig. 70) approximately 0.6 times as long as pronotum; humeral angles obsolete; punctation dense, moderately defined, less so than that of pronotum; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.25 times as broad as elytra; punctation dense, defined, and rather coarse on tergites III-V, somewhat sparser on tergite VI than on tergite IV, distinctly sparser and finer on tergites VII and VIII than on anterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternites III–VI unmodified; posterior margin of sternite VII weakly concave (Fig. 71); sternite VIII with unmodified pubescence, posterior excision somewhat V-shaped and moderately deep, its depth nearly 0.25 times the length of sternite (Fig. 72); aedeagus 0.8–0.9 mm long; ventral process very narrow and apically acute in lateral view, strongly dilated dorsad in lateral view; dorso-lateral apophyses moderately stout and club-shaped, far from reaching apex of ventral process (Figs 73–75).

Comparative notes. Based on the male sexual characters (rather deep posterior incision of sternite VIII, morphology of the aedeagus), *N. clavatus* belongs to the *N. longilobatus* group. It is distinguished from all the species of this group by the shape of the dorso-lateral apophyses of the aedeagus and, except for its hypothesized adelphotaxon *N. rectus*, by the non-areolate punctation of the head. It additionally differs from the geographically close *N. rectus* by smaller body size.

Distribution and natural history. The type locality is situated in the eastern Daba Shan, to the north of Muyuping, western Hubei (Fig. 50). The specimens were sifted from leaf litter and moss in a young deciduous forest at an altitude of 2380 m.

The *Nazeris extensus* species group

***Nazeris extensus* sp. n.** (Figs 76–82)

Type material. Holotype ♂: "CHINA: S-Shaanxi (Daba Shan), SE pass, 22 km NW Zhenping, 32°00'N, 109°21'E, 1930 m, 11.VII.2001, leg. M. Schülke [C01-10] / mixed deciduous forest (sifted) [C01-10] / Holotypus ♂ *Nazeris extensus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 2♀: same data as holotype (cSch); 3♂, 2♀: "CHINA: S-Shaanxi (Daba Shan), creek valley SE pass, 20 km NW Zhenping, 31°59'N, 109°22'E, 1680 m, 11.VII.2001, leg. M. Schülke [C01-10A] / young mixed deciduous, small meadows, moss (sifted) [C01-10A]" (cSch, cAss); 2♀: "CHINA (S-Shaanxi) Daba Shan, creek valley SE pass, 20 km NW Zhenping, 1680 m, 31°59'N, 109°22'E (young mix. decid. for., leaves-sift.) 11.VII.2001 Wrase [10A]" (cSch, ZFMK).

Etymology. The specific epithet (Latin, adjective: stretched) refers to the long aedeagus.

Description. Body length 5.2–6.2 mm; length of forebody 2.7–3.0 mm. Habitus as in Fig. 77. Coloration: forebody brown to blackish; abdomen dark-brown to black; legs and antennae yellowish.

Head (Fig. 78) oblong, 1.05–1.10 times as long as broad; punctation conspicuously coarse, moderately dense, and somewhat areolate; interstices without microsculpture; eyes of moderate size and distinctly convex, slightly less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna approximately 1.5 mm long.

Pronotum (Fig. 78) 1.10–1.15 times as long as broad and approximately 0.95 times as broad as head; punctation coarse, non-areolate and moderately dense; interstices narrower than diameter of punctures, glossy; surface in posterior median and lateral portions somewhat uneven, along

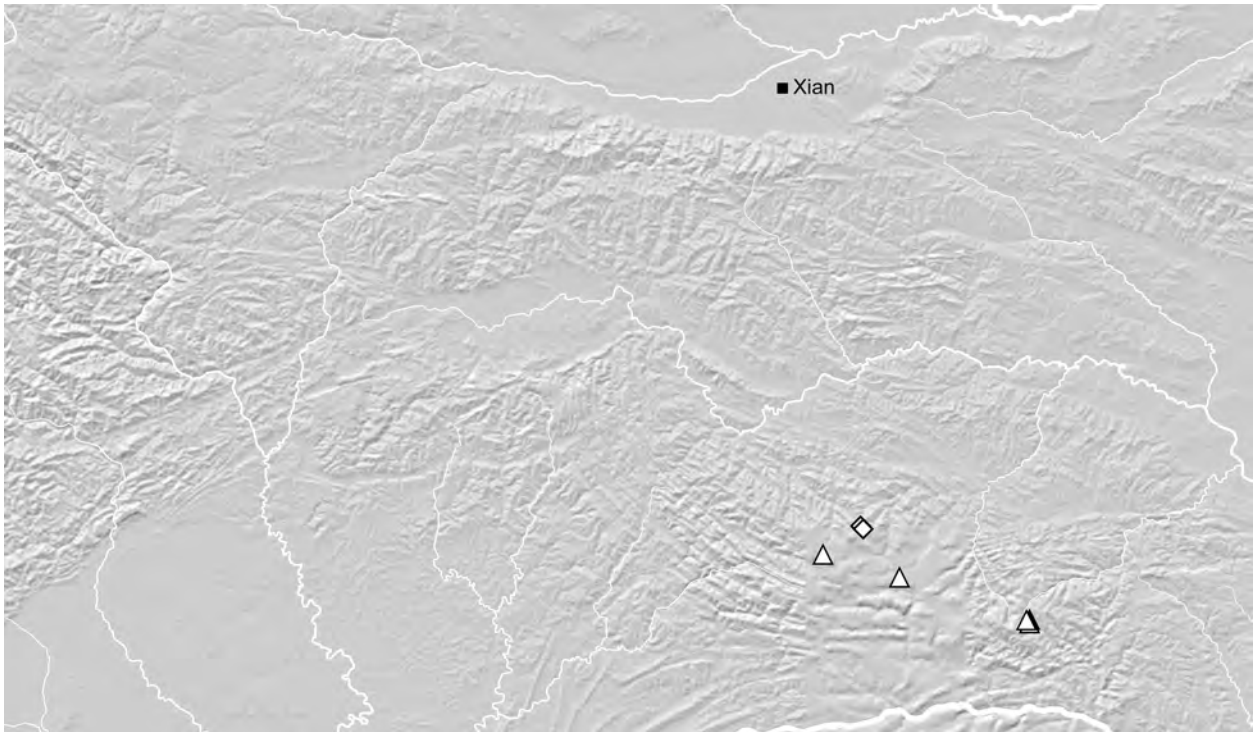


Fig. 76. Distributions of species of the *N. extensus* group: *N. extensus* (open diamonds); *N. angulatus* (open triangles).

midline narrowly impunctate and with additional oblique, somewhat elevated, and oblong lateral impunctate bands.

Elytra (Fig. 78) approximately 0.6 times as long as pronotum; humeral angles obsolete; punctation dense, moderately defined, and coarse; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.25 times as broad as elytra; punctation dense, defined, and moderately coarse on anterior, distinctly sparser and finer on posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

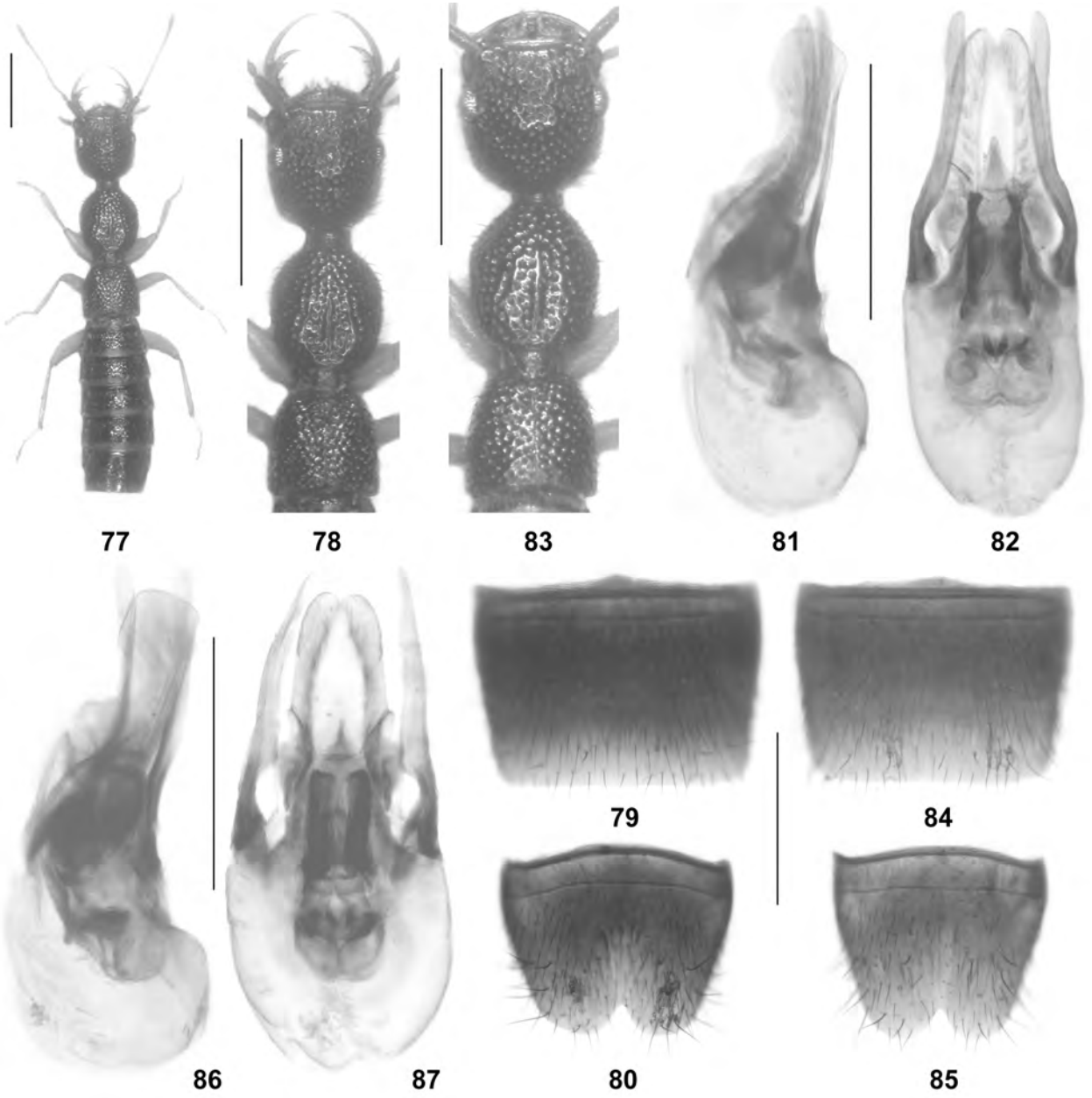
♂: sternite VI unmodified; sternite VII not distinctly modified (Fig. 79); sternite VIII with unmodified pubescence, posterior excision small, its depth only approximately 0.15 times the length of sternite (Fig. 80); aedeagus 0.9-1.0 mm long; dorso-lateral apophyses long, basally curved, apically straight in ventral view, and reaching apex of ventral process; ventral process apically of characteristic shape both in lateral and in ventral view (Figs 81–82).

Comparative notes. *Nazeris extensus* is distinguished from the syntopic or geographically close *N. parvincisus* and *N. bisinuosus* particularly by the coarser punctation of the head, the uneven and irregularly punctate posterior portion of the pronotum, the shape of the male sternite VIII, as well as by the longer and differently shaped aedeagus.

Distribution and natural history. The species was found in two adjacent localities in the Daba Shan, to the northwest of Zhenping, in southern Shaanxi (Fig. 76). The specimens were sifted from leaf litter and moss in mixed deciduous forests at altitudes of 1680 and 1930 m, partly together with *N. parvincisus*.

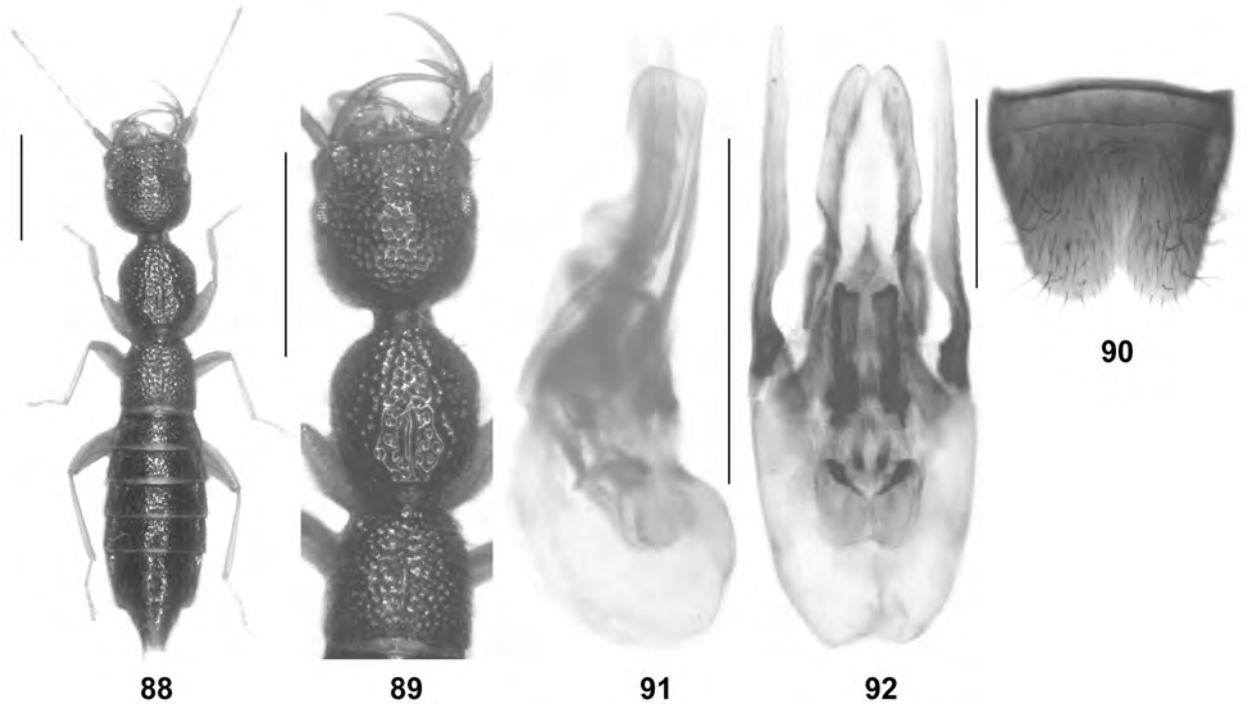
Nazeris angulatus sp. n. (Figs 76, 83–92)

Type material. Holotype ♂: "CHINA: Border Shaanxi - Sichuan [now Chongqing] (Daba Shan), pass 20 km SSE Zhenping, 1700–1800 m, 31°44'N, 109°35'E, 12.VII.2001, leg. M. Schülke [C01-07C] / mixed forest, small creek valley, moss, bark (sifted) [C01-07C] / Holotypus ♂ *Nazeris angulatus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 4♂, 3♀: same data as holotype (cSch, cAss, ZFMK); 2♂, 5♀: "CHINA: Border Shaanxi - Sichuan [now Chongqing] (Daba Shan), pass 20 km SSE Zhenping, 1700–1800 m, 31°44'N, 109°35'E, 9.VII.2001, leg. M. Schülke [C01-07] / young dry mixed forest, field edge, small creek valley, moss (sifted) [C01-07]" (cSch, cAss); 7♂, 9♀: "CHINA (border Shaanxi-Sichuan [now Chongqing]) Daba Shan, pass 20 km SSE Zhenping 1700-1800 m 31°44'N, 109°35'E (small creek vall., young mixed forest, leaf litt., moss) 9.&12.VII.2001 Wrase [07]" (cSch, cAss); 1♂, 1♀: "CHINA: W-Hubei (Daba Shan), creek valley 11 km NW Muyuping, 31°30'N, 110°22'E, 1960 m, 18.VII.2001, leg. M. Schülke [C01-17] / creek



Figs 77–87. *Nazeris extensus* (**77–82**) and *N. angulatus* (**83–87**). **77.** Habitus. **78, 83.** Forebody. **79, 84.** Male sternite VII. **80, 85.** Male sternite VIII. **81–82, 86–87.** Aedeagus in lateral and in ventral view. Scale bars: 77–78, 83: 1.0 mm; 79–82, 84–87: 0.5 mm.

valley, mixed deciduous forest (sifted) [C01-17]" (cAss); 2♀: "CHINA: W-Hubei (Daba Shan), creek valley 8 km NW Muyuping, 31°29'N, 110°22'E, 1550–1650 m, 18.VII.2001, leg. M. Schülke [C01-16A] / creek valley, deciduous forest, moss (sifted) [C01-16A]" (cSch, cAss); 2♀: "CHINA: W-Hubei (Daba Shan), pass E of Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N, 110°21'E, 19.VII.2001, leg. M. Schülke [C01-13C] / creek valley, 1950–2050 m, mixed deciduous forest, moss, dead wood, mushrooms (sifted) [C01-13C]" (cSch); 1♀: "China (W-Hubei) Daba Shan, pass E Mt. Da Shennongjia, 12 km NW Muyuping 31°30'N, 110°21'E 1950 m (dry creek vall., mix. decid. forest) 16.–22.VII.2001 Wrase [13]" (cSch); 1♂ [identified by J.-Y. Hu]: "China: Hubei Prov., Shennongjia N. R., Dajiuhu, 23-VIII-2004, LIN Jie leg." (SNUC); 2♂, 2♀ [identified by J.-Y. Hu]: "China: Chongqing City / Chengkou Coun. / Dabashan / lower Huang'angou / N31.51.227 E109.07.174 / alt. 2030m / 22~23-IV-2008 / HUANG Hao & XU Wang leg." (SNUC); 1♂: "CHINA: S-Shaanxi (Qinling Shan), pass



Figs 88–92. *Nazeris angulatus* from the environs of Muyuping. **88.** Habitus. **89.** Forebody. **90.** Male sternite VIII. **91–92.** Aedeagus in lateral and in ventral view. Scale bars: 88–89: 1.0 mm; 90–92: 0.5 mm.

on rd. Zhouzhi - Foping, 105 km SW Xi'an, N-slope, 1880 m, 33°44'N, 107°58'E, leg. M. Schülke [C01-03] / 4.VII.2001, shady rockwall base, moist (sifted) [C01-03]" (cAss).

Comment. The data for the paratypes deposited in the SNUC were communicated to me by J.-Y. Hu. His identification was confirmed based on photographs of the male primary and secondary sexual characters.

Etymology. The specific epithet (Latin, adjective) refers to the subbasally angled dorso-lateral apophyses of the aedeagus.

Description. Body length 4.5–5.8 mm; length of forebody 2.6–2.9 mm. External characters (Figs 83, 88–89), including coloration, as in *N. extensus*.

♂: sternite VI unmodified; sternite VII not distinctly modified (Fig. 84); sternite VIII with unmodified pubescence, posterior excision small, its depth approximately 0.15 times the length of sternite (Figs 85, 90); aedeagus 0.8–0.9 mm long; dorso-lateral apophyses long, subbasally with (usuaslly) angular projection, and slightly projecting beyond apex of ventral process; ventral process apically of characteristic shape both in lateral and in ventral view (Figs 86–87, 91–92).

Intraspecific variation. The shape of the dorso-lateral apophyses is apparently subject to some intraspecific variation. In the male from the environs of Muyuping the dorso-lateral apophyses are subbasally not distinctly angled, but curved (Figs 91–92). The male sternite VIII (Fig. 90) and the external characters (Figs 88–89), however, are identical to those of material from other localities. Moreover, the locality to the northwest of Muyuping is situated between Chongqing and Da Shennongjia, where males with angular dorso-lateral apophyses were found, suggesting that the observed differences are an expression of intra- rather than interspecific variation.

Comparative notes. Based on the highly similar external and male secondary sexual characters, as well as on the similarly derived morphology of the aedeagus, *N. angulatus* is closely allied to *N. extensus*, from which it is distinguished by the longer and subbasally angularly produced dorso-lateral apophyses and the differently shaped ventral process of the aedeagus. It differs from the syntopic *N. compressus* by the completely different male sexual characters, as well as by external characters such as its larger size, the much coarser and less regular punctation of the forebody, and by the much more pronounced impunctate median band in the posterior half of the pronotum. From the syntopic *N. rectus*, it is separated by the paler coloration, smaller average size, coarser and areo-

late punctation of the head, sparser punctation of the posterior abdominal tergites, by the smaller posterior excision of the males sternite VIII, and by the completely different morphology of the aedeagus

Distribution and natural history. The known distribution ranges from the environs of Chongqing to Da Shennongjia in the western Daba Shan (Fig. 76). The label of one of the paratypes indicates that this specimen was collected in the Qinling Shan in southern Shaanxi. This specimen was almost certainly mislabelled. The same phenomenon was observed for a *Lathrobium* species with the same labels. The material from the Daba Shan was sifted from leaf litter and moss in mixed deciduous forests at altitudes between 1550 and 2050, together with *N. rectus*.The specimens were sifted from leaf litter and moss in a young mixed forests at altitudes of 1550–2050 m, together with *N. compressus* or *N. rectus*.

The *Nazeris cultellatus* species group

***Nazeris cultellatus* sp. n.** (Figs 50, 93–99)

Type material. Holotype ♂: "CHINA: S-Shaanxi (Qinling Shan), pass on rd. Zhouzhi-Foping, 105 km SW Xi'an, N-slope, 1700 m, 33°46'N, 107°58'E, leg. M. Schülke [C01-02] / 3.VII.2001, small creek valley, mixed deciduous forest, moss (sifted) [C01-02] / Holotypus ♂ *Nazeris cultellatus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 1♀: same data as holotype (cSch, cAss); 1♂: "CHINA: S-Shaanxi (Qinling Shan), pass on rd. Zhouzhi-Foping, 105 km SW Xi'an, N-slope, 1990 m, 33°44'N, 107°59'E, leg. M. Schülke [C01-01] / 2./4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms (sifted) [C01-01]" (cSch); 1♂: "China: Shaanxi, Qin Ling Shan, 107.56 E, 33.45 N, Autoroute km 93 S of Zhouzhi, 108 km SW Xian, Mountain Forrest [sic], sifted, 1650 m, 1.–2.09.1995, leg. M. Schülke" (cSch); 1♂: "China: Shaanxi, Qin Ling Shan, 110.06 E, 34.27 N, Hua Shan Mt., N Valley, 1200–1400 m, 118 km E Xian, sifted, 18.&20.08.1995, leg. M. Schülke" (cAss); 4♂, 6♀ [identified by J.-Y. Hu]: "China: Shaanxi Prov., Foping, alt. 1250–1400 m, 18-V-2004, Hu Jia-Yao, Tang Liang & Zhu Li-Long leg." (SNUC); 6♂, 6♀ [identified by J.-Y. Hu]: "China: Shaanxi Prov., Zhouzhi Coun., Houzhenzi, N33.51.203 E107.50.183, alt. 1260 m, 5~10-V-2008, Huang Hao & Xu Wang leg." (SNUC); 4♂, 3♀ [identified by J.-Y. Hu]: "China: Shaanxi Prov., Zhouzhi Coun., Houzhenzi, West Sangongli Gou, N33.50.613 E107.48.524, alt. 1336 m, 17~19-V-2008, Huang Hao & Xu Wang leg." (SNUC); 9♂, 6♀ [identified by J.-Y. Hu]: "China: Shaanxi Prov., Ningshaan Coun., Huoditang Linchang, N33.26.060 E108.26.291, alt. 1724 m, 24~25-V-2008, Huang Hao & Xu Wang leg." (SNUC); 33♂, 35♀ [identified by J.-Y. Hu]: "China: Henan Prov., Xinyang City, Jigongshan, alt. 650–750 m, 5-VIII-2004, Hu, Tang & Zhu leg." (SNUC); 3♂, 7♀ [identified by J.-Y. Hu]: "China: Henan Prov., Xinyang City, Jigongshan, alt. 250–650 m, 6-VIII-2004, Hu, Tang & Zhu leg." (SNUC); 13♂, 14♀ [identified by J.-Y. Hu]: "China: Henan Prov., Nanyang City, Xixia Coun., Funiushan, alt. 1400-1700 m, 2-VIII-2004, Hu, Tang & Zhu leg." (SNUC); 13♂, 8♀ [identified by J.-Y. Hu]: "China: Anhui Prov., Anqing City, Qianshan Coun., Tianzhushan, alt. 960 m, 23-IV-2005, Hu & Tang leg." (SNUC); 7♂, 7♀ [identified by J.-Y. Hu]: "China: Anhui Prov., Anqing City, Qianshan Coun., Tianzhushan, alt. 1150–1250 m, 25-IV-2005 / Hu & Tang leg." (SNUC); 5♂, 1♀ [identified by J.-Y. Hu]: "China: Anhui Prov., Anqing City, Qianshan Coun., Tianzhushan, 18~20-V-2007, Tang & He leg." (SNUC).

Comment. The data for the paratypes deposited in the SNUC were communicated to me by J.-Y. Hu. His identification was confirmed based on photographs of the male primary and secondary sexual characters.

Etymology. The specific epithet (Latin, adjective: shaped like a knife) alludes to the laterally sharply compressed, somewhat knife-shaped ventral process of the aedeagus.

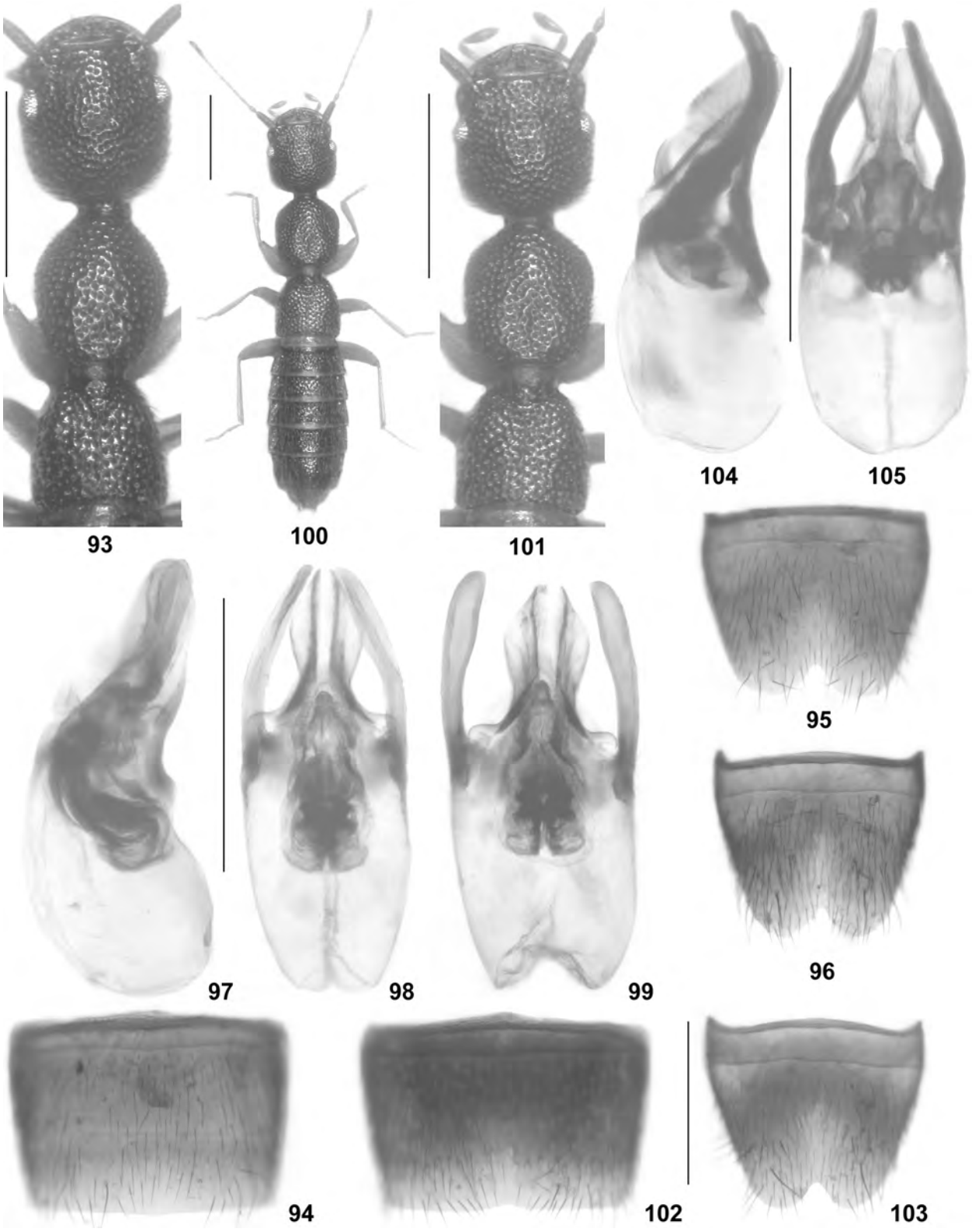
Description. Small species; body length 5.0–5.8 mm; length of forebody 2.6–2.8 mm. Coloration: body brown to dark-brown, abdomen sometimes somewhat darker than forebody, with reddish apex and paratergites; legs and antennae yellowish.

Head (Fig. 93) indistinctly oblong, approximately 1.02–1.05 times as long as broad, widest across eyes; punctation dense and not areolate; interstices without microsculpture, reduced to narrow ridges; eyes of moderate size and distinctly convex, at least slightly less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna 1.4–1.5 mm long.

Pronotum (Fig. 93) 1.15–1.20 times as long as broad and approximately 0.85–0.90 times as broad as head; punctation non-areolate and dense, distinctly coarser than that of head; interstices reduced to narrow ridges, glossy; whole surface with regular punctation, without impunctate midline, or other impunctate or sparsely punctate patches.

Elytra (Fig. 93) short, approximately 0.55 times as long as pronotum; humeral angles obsolete; punctation dense, defined, and coarse; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.2 times as broad as elytra; punctation dense, defined, and relatively coarse on anterior tergites, somewhat finer on posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.



Figs 93–105. *Nazeris cultellatus* (**93–99**; **96, 99.** Male from Hua Shan) and *N. compressus* (**100–105**). **93, 101.** Forebody. **94, 102.** Male sternite VII. **95–96, 103.** Male sternite VIII. **97–99, 104–105.** Aedeagus in lateral and in ventral view. **100.** Habitus. Scale bars: 93, 100–101: 1.0 mm; 94–99, 102–105: 0.5 mm.

♂: sternite VI unmodified; sternite VII with weakly convex posterior margin (Fig. 94); sternite VIII with unmodified pubescence, posterior excision moderately deep (Figs 95–96); aedeagus approximately 0.75 mm long; ventral process strongly compressed laterally, ventral surface very narrow; dorso-lateral apophyses moderately long, only slightly projecting beyond apex of ventral process (Figs 97–99).

Comparative notes. *Nazeris cultellatus* is readily distinguished from the syntopic *N. shaanxiensis* and *N. huanghaoi*, as well as from all other species distributed in the Qinling Shan by its smaller average size, the non-areolate punctation of the head, the regular punctation of the pronotum (impunctate midline or other impunctate patches absent), the shorter elytra, the shape of the posterior excision of the male sternite VII, and by the morphology of the smaller aedeagus (ventral process sharply compressed; shape of dorso-lateral apophyses). The highly similar external and male sexual characters suggest that *N. cultellatus* is most closely related to *N. nigritulus* Hu et al., 2011 (two paratypes examined), which was described from the Longwang Shan in Zhejiang. It differs from *N. nigritulus* by the paler coloration, the more slender head, the slightly less dense punctation of the abdomen (visible especially on tergite VI), and the slightly different morphology of the aedeagus (apex of parameres extending slightly beyond apex of ventral process; ventral process somewhat less dilated, broadest closer to apex, and apically more deeply incised in ventral view). In *N. nigritulus*, the parameres are slightly shorter (not quite reaching apex of ventral process), and the ventral process is more strongly dilated, broadest closer to base, and apically less deeply incised in ventral view. For illustrations of *N. nigritulus* see Hu et al. (2011).

Distribution and natural history. Unlike the other species of the study region, *N. cultellatus* appears to be remarkably widespread (Fig. 50). The species was found in numerous localities in the Qinling Shan (Shaanxi), as well as in the Jigong Shan [31°49'N, 114°07'E], the Funiu Shan [33°42'N, 112°18'E], and the Tianzhu Shan [30°45'N, 116°27'E] in Henan and Anhui provinces. The specimens from the Qinling Shan were sifted from leaf litter and moss in mixed deciduous forests at altitudes of 1200–1990 m, partly together with *N. shaanxiensis* and *N. huanghaoi*; those from Henan and Anhui were partly found at lower altitudes (at least as low as 650 m).

***Nazeris compressus* sp. n.** (Figs 50, 100–105)

Type material. Holotype ♂: "CHINA (border Shaanxi-Sichuan [now Chongqing]) Daba Shan, pass 20 km SSE Zhenping 1700-1800 m 31°44'N, 109°35'E (small creek vall., young mixed forest, leaf litt., moss) 9.&12.VII.2001 Wrase [07] / Holotypus ♂ *Nazeris compressus* sp. n., det. V. Assing 2012" (cAss). Paratypes: 8♂, 4♀: same data as holotype (cSch, cAss); 3♂, 3♀: "CHINA: Border Shaanxi - Sichuan [now Chongqing] (Daba Shan), pass 20 km SSE Zhenping, 1700–1800 m, 31°44'N, 109°35'E, 9.VII.2001, leg. M. Schülke [C01-07] / young dry mixed forest, field edge, small creek valley, moss (sifted) [C01-07]" (cSch, cAss, ZFMK).

Etymology. The specific epithet (Latin, adjective) refers to the laterally strongly compressed ventral process of the aedeagus.

Description. Small species; body length 4.1–5.0 mm; length of forebody 2.3–2.6 mm. Habitus as in Fig. 100. Coloration: forebody reddish to dark-brown, often with paler elytra; abdomen dark-brown to blackish, with reddish apex and paratergites; legs and antennae yellowish.

Head (Fig. 101) indistinctly oblong or as long as broad, widest across eyes; punctation dense and not areolate; interstices without microsculpture, forming narrow ridges; eyes of moderate size and distinctly convex, less than 1/3 as long as the distance from posterior margin of eye to posterior constriction of head. Antenna 1.4–1.5 mm long.

Pronotum (Fig. 101) short, approximately 1.1 times as long as broad and 0.9 times as broad as head; punctation similar to that of head; midline with weakly pronounced impunctate band posteriorly.

Elytra (Fig. 101) short, approximately 0.6 times as long as pronotum; humeral angles obsolete; punctation dense, defined, and coarse, similar to that of head and pronotum; interstices glossy. Hind wings completely reduced.

Abdomen approximately 1.20–1.25 times as broad as elytra; punctation dense, defined, and relatively coarse on anterior tergites, somewhat finer on posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII weakly convex.

♂: sternite VI unmodified; posterior margin of sternite VII weakly concave in the middle (Fig. 102); sternite VIII with unmodified pubescence, posterior excision small, its depth approximately 0.10–0.15 times the length of sternite (Fig. 103); aedeagus approximately 0.7 mm long; ventral process strongly compressed laterally; dorso-lateral apophyses distinctly projecting beyond apex of ventral process (Figs 104–105).

Comparative notes. Based on the similar external and male sexual characters, *N. compressus* is closely related to, probably the sister species of *N. cultellatus*, from which it is distinguished by the less oblong pronotum, the presence of a short and narrow median impunctate band in the posterior half of the pronotum, the similar punctation of the head, pronotum, and elytra, and the morphology of the

aedeagus, particularly the distinctly longer dorso-lateral apophyses.

Distribution and natural history. The type locality is situated in the Daba Shan, to the south-southeast of Zhenping, at the border between Shaanxi and Chongqing (Fig. 50). The specimens were sifted from leaf litter and moss in a young mixed forest at an altitude of 1700–1800 m, together with *N. angulatus*.

KEY TO SPECIES

1. Head with non-areolate punctation (e.g., Figs 93, 101). …… 2
– Head with areolate punctation (e.g., Figs 17, 23). . 6
2. Coloration of forebody reddish to dark-brown. Smaller species; length of forebody 2.3–2.8 mm. Pronotum either without impunctate median band posteriorly or with punctation similar to that of head. ♂: ventral process of aedeagus conspicuously laterally compressed. The *N. cultellatus* group. …….. 3
– Coloration of forebody blackish-brown to blackish. Larger species; length of forebody 2.5-3.2 mm. Pronotum with impunctate median band posteriorly; punctation coarser than that of head. ♂: ventral process of aedeagus not conspicuously laterally compressed. The *N. longilobatus* group (partim). …… 4
3. Pronotum with very regular punctation, without impunctate median band posteriorly; punctation distinctly coarser than that of head (Fig. 93). Elytra very short, approximately 0.55 times as long as pronotum (Fig. 93). ♂: sternite VIII as in Figs 95–96; aedeagus shaped as in Figs 97–99; dorso-lateral apophyses not distinctly extending beyond apex of ventral process. Widespread, from Shaanxi to Anhui (Fig. 50). ……..…… ***N. cultellatus* sp. n.**
– Pronotum with impunctate median band posteriorly; punctation not distinctly coarser than that of head (Fig. 101). Elytra slightly longer, approximately 0.6 times as long as pronotum (Fig. 101). ♂: sternite VIII as in Fig. 103; aedeagus shaped as in Figs 104–105; dorso-lateral apophyses distinctly extending beyond apex of ventral process. Daba Shan (Fig. 50). ……..……. ***N. compressus* sp. n.**
4. Abdominal tergites III–VI with conspicuously dense and coarser puncation, that of tergite VI not distinctly sparser than that of tergite IV. Pronotum more slender, approximately 1.15 times as long as broad and 0.8 times as broad as head. Punctation of pronotum and elytra conspicuously coarse, dense, and partly cofluent (Fig. 33). ♂: posterior excision of sternite VIII very small (Fig. 35); aedeagus stout, with short and broad ventral process, and with stout dorso-lateral apophyses (Figs 36–37). Daba Shan: Shaanxi (Fig. 2). The *N. parvincisus* group. ….. ***N. parvincisus* sp. n.**
– Abdomen with less coarse punctation, that of tergite VI finer and sparser than that of tergite IV. Pronotum less slender, 0.10–0.15 times as long as broad and 0.85–0.90 times as broad as head. Punctation of pronotum and elytra less coarse, less dense, and not confluent. ♂: posterior excision of sternite VIII much deeper; aedeagus slender, with long and slender ventral ventral process, and with longer and more slender dorso-lateral apophyses. Daba Shan: Hubei. ……...…….. 5
5. Smaller species; length of forebody 2.5–2.8 mm. ♂: sternite VII with weakly concave posterior margin (Fig. 71); posterior excision of sternite VIII slightly broader and less deep (Fig. 72); aedeagus with more slender ventral process (ventral view) and with club-shaped dorso-lateral apophyses (Figs 73–75). Distribution: Fig. 50. …… ***N. clavatus* sp. n.**
– Larger species; length of forebody 2.9–3.2 mm. ♂: sternite VII with small and shallow concavity posteriorly (Fig. 65); posterior excision of sternite VIII slightly narrower and deeper (Fig. 66); aedeagus with less slender ventral process (ventral view) and with straight, not club-shaped dorso-lateral apophyses (Figs 67–69). Distribution: Fig. 38. …….. ***N. rectus* sp. n.**
6. ♂: aedeagus stout and compact, with short ventral process. Species distributed in the Qinling Shan and the Micang Shan. The *N. shaanxiensis* group. ….. 7
– ♂: aedeagus slender, with long and slender ventral process. …….. 11
7. Forebody of uniformly blackish-brown to blackish coloration. ♂: posterior margin of sternite VII convexly produced in the middle (Fig. 24); posterior excision of sternite VIII rather deep and broadly V-shaped (Fig. 25); aedeagus with ventral process strongly dilated in the middle (ventral view); dorso-lateral apophyses apically obliquely truncate and with small tooth-like projection (Figs 27–31). S-Shaanxi/N-Sichuan: Micang Shan (Fig. 2). …….. ***N. dilatatus* sp. n.**
– Head and elytra often of paler coloration than pronotum. ♂: posterior margin of sternite VII truncate; posterior excision of sternite VIII less deep and usually narrower; aedeagus with ventral process not strongly dilated in the middle; dorso-lateral apophyses apically convex and without tooth-like projection. ... 8
8. ♂: aedeagus shaped as in Figs 4–5; apices of dorso-lateral apophyses slightly extending beyond apex of median lobe. Distribution more eastern: Zhouzhi and Ningshan counties (Fig. 2). …… ***N. shaanxiensis* Hu & Li**
– ♂: aedeagus of different shape; apices of dorso-lateral apophyses not reaching beyond apex of median lobe. Western Quinling Shan and Micang Shan. 9

9. ♂: aedeagus shaped as in Figs 20–21. S-Shaanxi: Micang Shan (Fig. 38). …… ***N. micangicus* sp. n.**
– ♂: aedeagus of different shape. S-Gansu: Western Qinling Shan. …… 10
10. ♂: ventral process of aedeagus broader and shorter, its apex more acute both in lateral and in ventral view (Figs 12–14). Mountains to the southeast of Longnan (Fig. 2). …… ***N. sociabilis* sp. n.**
– ♂: ventral process of aedeagus more slender and longer, its apex less acute (Figs 9–10). Region to the north of Chengxian (Fig. 2). ….. ***N. custoditus* sp. n.**
11. Head with coarser punctation (e.g., Fig. 83). Pronotum with uneven surface, posteriorly usually with more or less distinct lateral elevations. Punctation of abdominal tergites VI–VIII moderately dense to sparse, that of tergite VI distinctly sparser and finer than that of tergite IV. ♂: posterior excision relatively small and somewhat V-shaped; aedeagus with weakly sclerotized ventral process; dorso-lateral apophyses weakly sclerotized, subbasally distinctly curved, and nearly straight in apical 3/4–4/5. Daba Shan (Fig. 76). The *N. extensus* group. …….. 12
– Head with less coarse punctation. Pronotum in most species with less uneven surface. Punctation of abdominal tergite VI often not or only slightly finer and sparser than that of tergite IV. ♂: aedeagus more distinctly sclerotized; dorso-lateral apophyses of different shape. The *N. longilobatus* species group (partim). ……... 13
12. ♂: dorso-lateral apophyses of aedeagus apically straight and subbasally usually angularly dilated (Figs 86–87, 91–92); sternite VIII as in Figs 85, 90. Western Daba Shan (Fig. 76). …… ***N. angulatus* sp. n.**
– ♂: dorso-lateral apophyses of aedagus apically smoothly curved, without angular dilatation. Shaanxi (Fig. 76). ……... ***N. extensus* sp. n.**
13. Larger species; length of forebody 2.9–3.2 mm. Elytra relatively longer, 0.65–0.70 times as long as pronotum (Fig. 40). Qinling Shan. ……... 14
– Smaller species; length of forebody 2.5–2.8 mm. Elytra shorter, 0.60–0.65 times as long as pronotum (Figs 51, 56). Daba Shan. …… 15
14. Punctation of abdomen conspicuously dense, even on tergites VI and VII (Figs 41–42). ♂: ventral process of aedeagus of characteristic shape; dorso-lateral apophyses distinctly curved in ventral view (Figs 45–46); posterior excision of sternite VIII less deep and broader (Fig. 44). Mountains to the southeast of Longnan (Gansu) (Fig. 38). ... ***N. longilobatus* sp. n.**
– Punctation of abdomen less dense, particularly on tergites VI and VII. Ventral process of aedeagus of different shape (Figs 48–49), dorso-lateral apophyses almost straight; posterior excision of sternite VIII deeper and narrower (Fig. 47). Qinling Shan: environs of Taibai Shan (Shaanxi) (Fig. 38). …… ***N. huanghaoi* Hu & Li**
15. ♂: ventral process of aedeagus very slender and apically acute, both in lateral and in ventral view (Figs 54–55), dorso-lateral apophyses shorter and stouter; posterior excision of sternite VIII deeper and narrower (Fig. 52). Distribution: Fig. 50. ... ***N. acutus* sp. n.**
– ♂: ventral process of aedeagus less slender and with dorsal extension (lateral view), dorso-lateral apophyses longer, more slender, and bisinuate (Figs 59–62); posterior excision of sternite VIII slightly broader and less deep (Fig. 58). Distribution: Fig. 38. …… ***N. bisinuosus* sp. n.**

CHECKLIST OF THE *NAZERIS* SPECIES OF MAINLAND CHINA AND TAIWAN

Species	Distribution
acutus sp. n.	Shaanxi: Daba Shan
aestivalis Ito, 1995	Taiwan
affinis Ito, 1996	Taiwan
alishanus Ito, 1985	Taiwan
alpinus Watanabe & Xiao, 1997	Yunnan: Yulongxue Shan
angulatus sp. n.	Shaanxi/Chongqing/Hubei: Daba Shan
anhuiensis (J. Li, 1993)	Anhui
baihuanensis Watanabe & Xiao, 2000	Yunnan: Gaoligong Shan: Baoshan
baishanzuensis Hu, Li & Zhao, 2011	Zhejiang: Baishanzu
bicornis Hu, Li & Zhao, 2007	Sichuan: Gongga Shan
bisinuosus sp. n.	Shaanxi: Daba Shan
brunneus Hu, Zhao & Zhong, 2006	Jiangxi: Wuyi Shan
canaliculatus Zheng, 1992	Sichuan: Wolong
caoi Hu, Li & Zhao, 2011	Yunnan: Nabanhe Nature Reserve
centralis Ito, 1996	Taiwan
chinensis Koch, 1939	Zhejiang: Tianmu Shan
clavatus sp. n.	Hubei: Daba Shan
compressus sp. n.	Shaanxi/Chongqing: Daba Shan
cultellatus sp. n.	Shaanxi: Qinling Shan; Henan; Anhui
custoditus sp. n.	Gansu: western Qinling Shan
daliensis Watanabe & Xiao, 1997	Yunnan: Diangcang Shan, Laohu Shan
dayaoensis Hu & Li, 2012	Guangxi: Dayao Shan

Checklist of the Nazeris species of mainland China and Taiwan (coninued).

Species	Distribution
dilatatus sp. n.	Shaanxi/Sichuan: Micang Shan
extensus sp. n.	Shaanxi: Daba Shan
femoralis Ito, 1985	Taiwan
foliaceus Zheng, 1992	Sichuan: Wolong
formosanus Ito, 1996	Taiwan
fujianensis Hu, Li & Zhao, 2010	Fujian: Meihua Shan Nature Reserve
furcatus Hu, Li & Zhao, 2011	Zhejiang: Wuyanling
giganteus Watanabe & Xiao, 1997	Yunnan: Diangcang Shan, Laohu Shan
grandis Hu & Li, 2012	Guangxi: Dayao Shan
guizhouensis Hu et al., 2005	Guizhou: Fanjing Shan
hailuogouensis Hu, Li & Zhao, 2007	Sichuan: Gongga Shan
huanghaoi Hu & Li, 2010	Shaanxi: Qinling Shan: Taibai Shan
huanxipoensis Watanabe & Xiao, 2000	Yunnan: Tengchong env.
imitator Ito, 1996	Taiwan
ishiianus Watanabe & Xiao, 2000	Yunnan: Gaoligong Shan: Baoshan
jiulongshanus Hu, Li & Zhao, 2011	Zhejiang: Jiulong Shan
jizushanensis Watanabe & Xiao, 1997	Yunnan: Jizu Shan
lijinweni Hu, Li & Zhao, 2011	Zhejiang: Fengyang Shan
lingulatus Hu & Li, 2009	Anhui: Guniujiang Shan
longilobatus sp. n.	Gansu: western Qinling Shan
luoi Hu & Li, 2012	Guangxi: Dayao Shan
magnus Hu, Li & Zhao, 2007	Sichuan: Erlang Shan
matsudai Ito, 1985	Taiwan
megalobus Hu & Li, 2012	Guangxi: Dayao Shan
micangicus sp. n.	Shaanxi: Micang Shan
minor Koch, 1939	Zhejiang: Tianmu Shan
monticola Ito, 1996	Taiwan
motuensis Hu, Li & Zhao, 2008	Xizang: Aniqiao
nabanhensis Hu, Li & Zhao, 2011	Yunnan: Nabanhe Nature Reserve
nigritulus Hu, Li & Zhao, 2011	Zhejiang: Longwang Shan
niutoushanus Hu, Li & Zhao, 2011	Zhejiang: Nioutou Shan
nomurai Watanabe & Xiao, 2000	Yunnan: Gaoligong Shan: Baoshan
parabrunneus Hu, Li & Zhao, 2011	Zhejiang: Jiulong Shan
parvincisus sp. n.	Shaanxi/Chongqing: Daba Shan
persimilis Ito, 1995	Taiwan
qingchengensis Zheng, 1992	Sichuan: Qingcheng Shan
qini Hu & Li, 2012	Guangxi: Dayao Shan
rectus sp. n.	Hubei: Daba Shan
robustus Ito, 1995	Taiwan
rougemonti Ito, 1996	Zhejiang: Tianmu Shan
ruani Hu, Li & Zhao, 2007	Sichuan: Labahe
sadanarii Hu & Li, 2010	
= *hisamatsui* Hu & Li, 2009	Anhui: Guniujiang Shan
shaanxiensis Hu & Li, 2010	Shaanxi: Qinling Shan
shenshanjiai Hu, Li & Zhao, 2011	Zhejiang: Fengyang Shan
silvestris Ito, 1996	Taiwan
simulans Ito, 1996	Taiwan
smetanai Ito, 1996	Taiwan
sociabilis sp. n.	Gansu: western Qinling Shan
taiwanus hohuanus Ito, 1985	Taiwan
taiwanus taiwanus Ito, 1985	Taiwan
tangi Hu, Li & Zhao, 2008	Xizang: Dongjiu
tani Hu & Li, 2012	Guangxi: Dayao Shan
tianmuensis Hu, Li & Zhao, 2011	Zhejiang: Tianmu Shan
trifolius Ito, 1996	Taiwan
truncatus Zheng, 1992	Sichuan: Emei Shan
uenoi Ito, 1995	Taiwan
vernalis Ito, 1995	Taiwan
wuyiensis Hu, Zhao & Zhong, 2006	Jiangxi: Wuyi Shan
xuwangi Hu, Li & Zhao, 2010	Fujian: Meihuashan Nature Reserve
yandangensis Hu, Li & Zhao, 2011	Zhejiang: Yandang Shan
yanyingae Hu, Li & Zhao, 2011	Zhejiang: Baishanzu
yasutoshii Ito, 1996	Taiwan
zhangi Watanabe & Xiao, 1993	Yunnan: Yuan Shan near Kunming
zhujingwenae Hu, Li & Zhao, 2011	Zhejiang: Siming Shan

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