

<https://doi.org/10.25221/fee.495.4>

<https://elibrary.ru/ppgswe>

<https://zoobank.org/References/8F3243B9-6137-4F12-A924-E8029D76AE45>

**TWO NEW SPECIES OF GENUS *ANOMALA* SAMOUELLE, 1819  
(COLEOPTERA: SCARABAEIDAE: RUTELINAE) FROM CHINA**

**F. L. Wang**

*Dazhulin, Yubei District, Chongqing, 621000, P. R. China. E-mail: 531609816@qq.com*

**Summary.** Two new species of the genus *Anomala* Samouelle, 1819 are described from Yunnan province of China, namely *A. tentaculata* **sp. n.** and *A. menghaiensis* **sp. n.**

**Key words:** Anomalini, taxonomy, new species, description, Dehong, Xishuangbanna, Yunnan, Asia.

**Ф. Л. Ван. Два новых вида рода *Anomala* samouelle, 1819 (Coleoptera: Scarabaeidae: Rutelinae) из Китая // Дальневосточный энтомолог. 2024. N 495. С. 22-28.**

**Резюме.** Из провинции Юньнань в Китае описаны два новых вида рода *Anomala* Samouelle, 1819: *A. tentaculata* **sp. n.** и *A. menghaiensis* **sp. n.**

**INTRODUCTION**

The Oriental species of the genus *Anomala* Samouelle, 1819 have recently been intensively studied, especially in China and Indochina (Huang & Wang, 2019; Prokofiev, 2021a, b; Wang, 2020, 2021a, b, c, 2022; Wang & Zorn, 2021; Zhao, 2019, 2021; Zhao & Pham, 2023, Zhao & Zorn, 2022). However, China still hides a large number of undescribed species from southern and southwestern area. In this study, two species of them are described as new to science.

**MATERIAL AND METHODS**

Morphological terminology of elytra used in this study was introduced by Lu *et al.* (2018). Type specimens of the species described in this paper bear the following labels, separate label lines are indicated by a slash (/), and separate labels by a double slash (//): HOLOTYPE or PARATYPE // *Anomala* [species name] / Wang det. 2023 // Collecting data. The materials examined in this study are housed in the Mianyang Normal University, Mianyang, China (MYNU).

**DESCRIPTION OF NEW SPECIES**

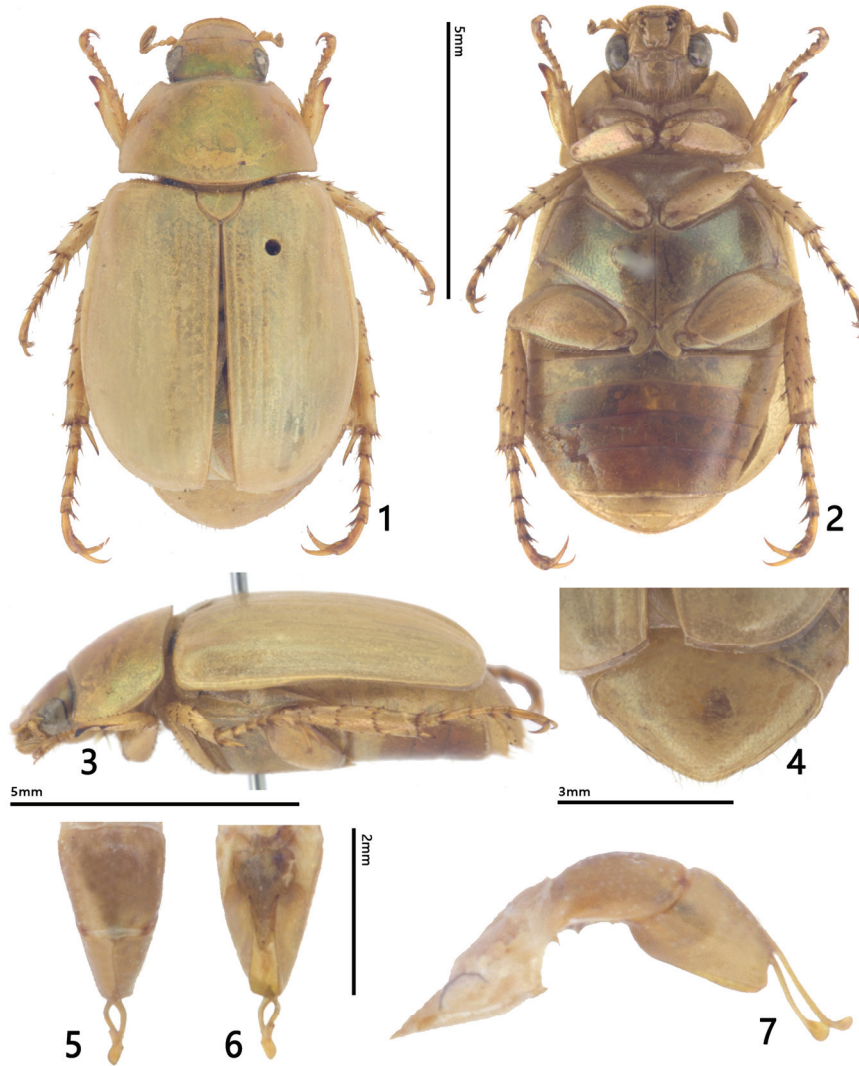
***Anomala tentaculata* sp. n.**

<https://zoobank.org/NomenclaturalActs/81F78E07-BFC2-4132-B4EF-2BA3CB2B4381>

Figs 1–7

TYPE MATERIAL. Holotype: ♂ (MYNU), **China**: Yunnan Province / Yingjiang County, Xima / Hulukou, VI.2020 / Wei-Zong Yang leg. // HOLOTYPE // *Anomala tentaculata* / Wang det. 2023. Paratypes: 2 ♂ (MYNU), same data as holotype.

DESCRIPTION. Holotype, male. Length: 9.0 mm; width: 5.9 mm. Body ovoid, moderately convex.



Figs 1–7. *Anomala tentaculata* sp. n., holotype, male: 1–3, habitus; 4, pygidium; 5–7, male genitalia. 1, 5 – dorsal view; 2, 6 – ventral view; 3, 7 – lateral view from left.

Coloration. Whole body color light brown except for abdominal ventrites I-IV reddish brown. Head, pronotum, scutellum, elytra, metasternum, and abdominal ventrites with weak metallic green shine. Legs predominantly light brown, with the distal portion of tarsomeres and protibia reddish brown, short setae of tarsus joints and tibiae dark brown.

Head. Clypeus broad trapezoidal, disc densely, shallowly punctate, anterior margin rounded, moderately reflexed. Frons with dense punctures, which are smaller on vertex. Ratio of interocular width/head width approximately 0.68. Length of antennal club shorter than combined length of antennomeres 2–6.

Pronotum approximately 1.78 times as wide as long; disc with moderately deep, moderately dense punctures; anterior angles subrectangular, posterior angles obtuse; sides of pronotum well curved, lateral margins with several long setae; anterior marginal line and posterior marginal line complete.

Scutellum triangular, with the sides moderately curved, posterior corner rounded, punctures resemble those on pronotum.

Elytra striate regularly, interval I (subsutural interval) double wider than costae interval 1 (sutural costae), with a row of deep longitudinal punctures in the middle of interval I, costae interval 1 narrower than the costae interval 2. Surface of elytra sparsely punctate. Epipleuron ridged prominently, broadest just after umbones, disappearing in posterior 1/4.

Propygidium with dense transverse punctures, posterior margin raised in the middle, with several long setae.

Pygidium triangular, slightly convex; surface with densely, transversely striate, striae partly confluent and reticulated, posterior margin with several long, erect setae.

Abdominal ventrites with moderately, densely punctate, punctures becoming gradually transverse punctures to the sides; each ventrite with several setae from side to side, posterior margin slightly smooth.

Legs. Protibia bidentate, apical tooth slightly prolonged, proximal tooth acute, apex sharp, inner spur positioned in opposite to proximal tooth. Mesotibia and metatibia slightly fusiform, end not widened, surface with short setae, setae on inner surface slightly long, metatibia and metatarsal nearly equal length. Protarsal and mesotarsal outer claw clefted.

Aedeagus as Figs 5–7.

DIFFERENTIAL DIAGNOSIS. This species is distinct in the genus by the following combination of characters: body small, ovoid; the whole body color light brown with weak metallic green shine, but abdominal ventrites reddish brown; protarsal short and strong; each parameres with an elongate and tentacle-shape part, apex expanded and rounded. Among the species distributed in the China, Indochina, and Himalayan region, the new species is most similar and probably closely related to: *A. agilis* Arrow, 1917; *A. ardoini* Frey, 1971; *A. aureoflava* Arrow, 1917; *A. aurora* Arrow, 1912; *A. ciliatipes* Arrow, 1917; *A. dolichophalla* Prokofiev, 2015; *A. gracilentata* Reitter, 1903; *A. hamuliphalla* Prokofiev, 2021; *A. nepalensis* Machatschke, 1966; *A. nervulata* Paulian, 1959; *A. nigricollis* Lin, 1992; *A. nigripes* Nonfried, 1892; *A. obscurata* Reitter, 1903; *A. palleola* (Gyllenhal, 1817); *A. potanini* Medvedev, 1949; *A. puncticlypea* Lin, 1992; and *A. variegata* Hope, 1831. *Anomala tentaculata* sp. n. can be distinguished from *A. agilis* (Lin, 1981: fig 3), *A. ardoini* (Frey, 1971: fig 5), *A. aureoflava* (Arrow, 1917: Plate III, figs 32 & 33), *A. dolichophalla* (Prokofiev, 2015: figs 4–6), *A. hamuliphalla* (Prokofiev, 2021: figs 3–5), *A. nepalensis* (Machatschke, 1966: figs 6 & 7), *A. nervulata* (Paulian, 1959: figs 211–213), *A. nigricollis* (Lin, 1992: fig 3), *A. palleola* (Prokofiev, 2015: fig 9), *A. potanini* (Prokofiev, 2015: fig 10), *A. puncticlypea* (Lin, 1992: fig 4), and *A. variegata* (Arrow, 1917: Plate IV, fig 9) by the shape of parameres. This new species is different from *A. aurora* by body smaller, body without dark patch or spot, from *A. ciliatipes* by

legs short and claw-joint without long bristles, from *A. gracilentia* (female holotype) by whole body color light yellow, without dark patch on pronotum, from *A. nigripes* by body smaller, elytra striate distinctly, all tarsus light brown, from *A. obscurata* by body shape more rounded, elytra color light yellow (Arrow, 1917; Nonfried, 1892; Reitter, 1903).

ETYMOLOGY. The name refers to each parameres with an elongate and tentacle-shape part.

DISTRIBUTION. Known only from its type locality in southwestern Yunnan province, China.

***Anomala menghaiensis* sp. n.**

<https://zoobank.org/NomenclaturalActs/B1F9526D-3512-435E-8B6B-A0E68B8DE29A>

Figs 8–16

TYPE MATERIAL. Holotype: ♂ (MYNU), **China**: Yunnan Province / Xishuangbanna / Menghai County /IV–V. 2023, local leg. // HOLOTYPE // *Anomala menghaiensis* / Wang det. 2023; Paratypes: 2 ♂, 1 ♀ (MYNU): same data as holotype.

DESCRIPTION. Holotype, male. Body length: 18.4 mm, width: 9.0 mm. Body elongate ovoid, rather convex in profile.

Coloration. Whole body color dark brown with bronze metallic lustre and green reflections except for antennal club brown. Each elytron with four yellow spots from sides to sutural, all spots located separately on costal interval 1 (sutural interval) to costal interval 4, connection of all spots on elytra forming M-shaped.

Head. Clypeus approximately semicircular, width slightly more than twice as length, anterior margin moderately reflexed, disc slightly raised, surface densely rugo-punctate. Fronto-clypeal suture slightly arcuate backward. Frons densely punctate, punctures coalescent posterior of fronto-clypeal suture and area close to eyes, interocular distance equals 0.63 times the maximum transverse head width. Vertex with dense, rounded, identifiable punctures. Antennal club longer than antennomeres 1–6 combined.

Pronotum widely trapezoidal, approximately 1.86 times wider than long in dorsal view, with two rounded impressions before middle on each side and before posterior angle. Sides weakly convergent before middle, anterior marginal line complete, posterior marginal line disappear before scutellum, posterior margin forward in the middle, gently backward between scutellum and posterior angle. Anterior angles acute and produced; posterior angles sub-rectangular. Surface densely, finely, and transversely rugo-punctate, becoming unmerged transverse punctures on posterior areas between posterior angles and scutellum, the narrow posterior margin burnished.

Scutellum nearly triangle, broader than long, surface with dense transverse punctures, slightly sparser than those on pronotum.

Elytra. Surface with regular striae, costal intervals lightly raised, striae punctures distinct, interval I double wider than interval II, interval II with a row of longitudinal punctures before central portion. Surface slightly corrugated, densely transverse punctate. Epipleuron slightly widened in anterior 2/5, disappearing just after middle of side.

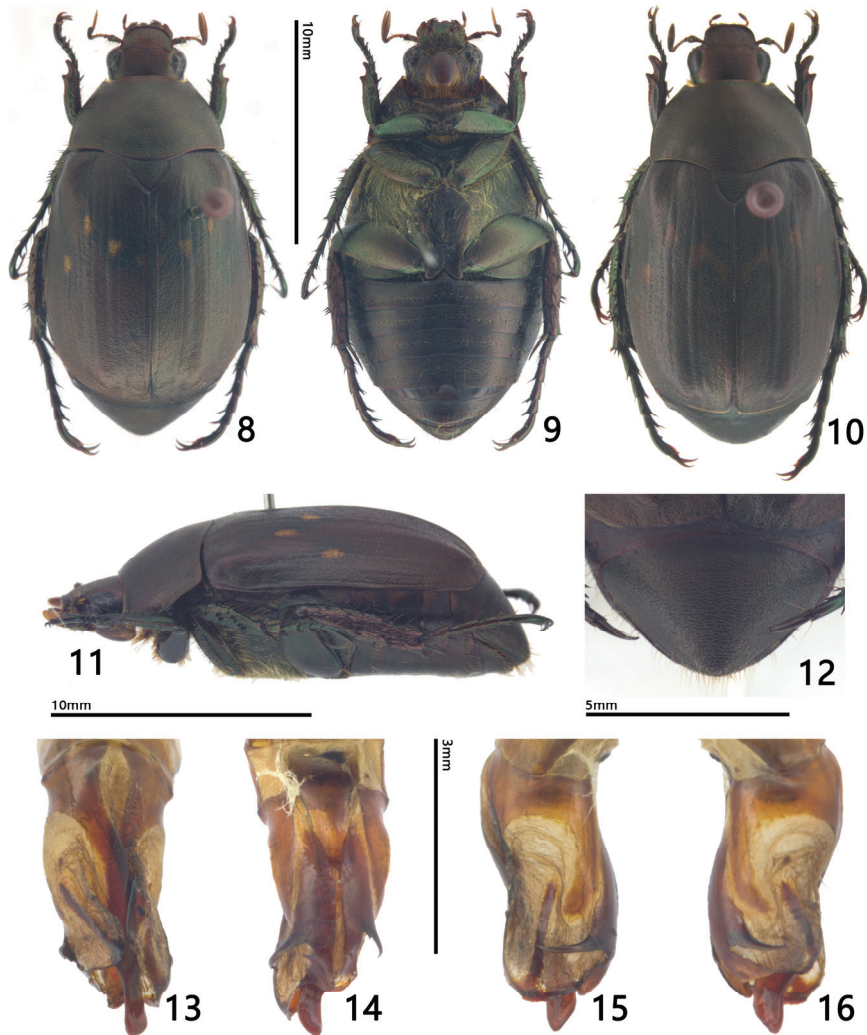
Propygidium. Surface of anterior half with dense transverse stripes, surface of posterior half smooth, with several long setae.

Pygidium weakly convex in profile. Surface densely transversely striate, striae partly meshedly transversely combined together. Area before apex angle raised, apex with yellow setae.

Abdominal ventrites. Surface with dense transverse punctures, punctures becoming denser to the sides, posterior margin smooth, each ventrite with a transverse row of long yellow setae.

Legs. Protibia bidentate, outer margin curved, apical tooth short, slightly bend outwards, proximal tooth acute, inner spur short, positioned in opposite to proximal tooth. Mesotibia and metatibia slightly fusiform, inner surface with a row of long setae, metatibia with quite a number of deep stripes. Protarsal and mesotarsal outer claw clefted.

Genitalia as in Figs 13–16.



Figs 8–16. *Anomala menghaiensis* sp. n.: 8, 9, 11–16, holotype, male; 10 – paratype, female. 8–11 – habitus; 12 – pygidium; 13–16 – male genitalia. 8, 10, 13 – dorsal view; 9, 14 – ventral view; 11, 16 – lateral view from left; 15 – lateral view from right.

DIFFERENTIAL DIAGNOSIS. *Anomala menghaiensis* sp. n. differs from most species of this genus around China and Indochina by following combination of characters: body color dark reddish-brown, with yellow spots (maybe sometimes with yellow band) slightly before the middle on each elytron, elytra glabrous and without regular striae, parameres partly membranous, membranes and osseous part wrapped into cylindrical shape generally, and left parameres have a long osseous branch. Species show common characteristics above of *Anomala* known were *A. flavonotata* Arrow, 1912; *A. flavofasciata* Arrow, 1912; *A. projecta* Lin, 2002; *A. transversa* Lin, 1999; and *A. accincta* Prokofiev, 2013. This new species can be distinguished with five similar species above by the shape of parameres (compare figs 5–6 with Lin, 1988: fig 4; Prokofiev, 2013: figs 13–14; Wang, 2022: figs 44–47, 52–55; Zorn, 2005: figs 3–5).

ETYMOLOGY. This species is named after its type locality Menghai county, China.

DISTRIBUTION. Known only from its type locality in southern Yunnan province, China.

#### ACKNOWLEDGMENTS

I would like to thank Hao Xu (MYNU) for providing specimens for comparing with the new species, and Carsten Zorn (Gnoien, Germany) for generously sharing taxonomic articles of the subfamily Rutelinae.

#### REFERENCES

- Arrow, G.J. 1917. *The Fauna of British India, including Ceylon and Burma. Coleoptera Lamellicornia part II (Rutelinae, Desmonycinae, and Euchirinae)*. Taylor & Francis, London. 387 pp., 5 pls.
- Frey, G. 1971. Neue Ruteliden und Melolonthiden aus Indien und Indochina (Col.). *Entomologische Arbeiten aus dem Museum G. Frey* 22: 109–133.
- Huang, G.-Q. & Wang, F.-L. 2019. Two new and one newly recorded species of *Anomala* Samouelle, 1819 from Yunnan, China. *Zootaxa*, 4706(2): 366–374. DOI: 10.11646/zootaxa.4706.2.9
- Lin, P. 1981. Coleoptera: Rutelidae. P. 355–387. In: *The Series of the Comprehensive Scientific Expedition to the Qinghai-Xizang Plateau. Insects of Xizang. Volume 1*. Science Press, Beijing. xi + 600 pp.
- Lin, P. 1988. Coleoptera: Rutelidae. P. 249–265. In: Huang F.S., Wang P.Y., Yin W.Y., Yu P.Y., Lee T.S., Yang C.K. & Wang X.J. (Eds): *Insects of Mt. Namjagbarwa region of Xizang*. Science Press, Beijing. i–xii + 621 pp.
- Lin, P. 1992. Coleoptera: Rutelidae. P. 503–524. In: Chen S. (Ed.): *Insects of the Hengduan Mountains region. Volume 1*. Science Press, Beijing. xii + 865 pp.
- Lu, Y.-Y., Zorn, C., Král, D., Bai, M. & Yang X.-K., 2018. Taxonomic revision of the genus *Glenopopillia*. *Acta Entomologica Musei Nationalis Pragae*, 58(2): 297–320. DOI: 10.2478/aemnp-2018-0026
- Machatschke, J.W. 1966. Eine neue *Anomala* aus der Verwandtschaft der *Anomala calva* Benderitter. *Khumbu Himal. Ergebnisse der Forschung Unternehmens Nepal Himalaya*, 1(3): 184–186.
- Nonfried, A.F. 1892. Verzeichnis der um Nienghali in Südchina gesammelten Lucanoiden, Scarabaeiden, Buprestiden und Cerambyciden, nebst Beschreibung neuer Arten. *Entomologische Nachrichten*, 18: 81–95.
- Paulian, R. 1959. Coléoptères scarabéides de l'Indochine (Rutelines et cétonines) (suite). *Annales de la Société Entomologique de France*, 128: 35–136.
- Prokofiev, A.M. 2013. New *Anomala* species from Vietnam (Coleoptera: Scarabaeidae: Rutelinae). *Russian Entomological Journal*, 22: 97–109.

- Prokofiev, A.M. 2015. New *Anomala* Samouelle, 1819 from South-East Asia (Coleoptera: Scarabaeidae: Rutelinae). *Russian Entomological Journal*, 24: 37–59.
- Prokofiev, A.M. 2021a. On the systematics of the Anomalina subtribe in Southeast Asia. *Amurian Zoological Journal*, 13(4): 581–594. DOI: 10.33910/2686-9519-2021-13-4-581-594
- Prokofiev, A.M. 2021b. Four new species of the genus *Anomala* Samouelle, 1819 from South-East Asia and a key to the species with the similar elytral sculpture. *Caucasian Entomological Bulletin*, 17(2): 375–386. DOI: 10.23885/181433262021172-375386
- Reitter, E. 1903. Bestimmungs-Tabelle der Melolonthidae aus der europäischen Fauna und den angrenzenden Ländern enthaltend die Gruppen der Rutelini, Hopliini und Glaphyrini. (Schluss.). *Verhandlungen des Naturforschenden Vereins in Brünn*, XLI [1902]: 28–158.
- Wang, F.-L. 2020. Nine new species of the genus *Anomala* from China. *Kogane, Tokyo*, 23: 61–75.
- Wang, F.-L. 2021a. A new species of the genus *Anomala* Samouelle, 1819 from China. *Far Eastern Entomologist*, 424: 14–20. DOI: 10.25221/fee.424.2
- Wang, F.-L. 2021b. Description of four new species of genus *Anomala* Samouelle from South China. *Studies and Reports*. Taxonomical Series, 17(1): 189–200.
- Wang, F.-L. 2021c. Two new *Anomala* species from China and Laos. *Studies and Reports*. Taxonomical Series, 17(2): 441–446.
- Wang, F.-L. 2022. Three new species of genus *Anomala* Samouelle from Yunnan, China. *Faunitaxys*, 10(56): 1–9. DOI: 10.57800/faunitaxys-10(56)
- Wang, F.-L. & Zorn, C. 2021. Description of a new species and new faunistic records of the genus *Anomala* Samouelle from China and neighboring regions. *Contributions to Entomology*, 71(1): 147–159. DOI: 10.21248/contrib.entomol.71.1.147-159
- Zhao, M.-Z. 2019. A new species of the genus *Anomala* from southern China. *Acta Entomologica Musei Nationalis Pragae*, 59(2): 481–489. DOI: 10.2478/aemnp-2019-0037
- Zhao, M.-Z. 2021. Contribution to the genus *Anomala* Samouelle, 1819 of China and adjacent regions. Part I: descriptions of two new species and remarks on four species. *Zootaxa*, 4903(4): 578–590. DOI: 10.11646/zootaxa.5168.2.5
- Zhao, M.-Z. & Pham, P. V. 2023. Two new species of the genus *Anomala* Samouelle from Vietnam and Laos, with a checklist of Vietnamese *Anomala*. *Faunitaxys*, 11(55): 1–11. DOI: 10.57800/faunitaxys-11(55)
- Zhao, M.-Z. & Zorn, C. 2022. Contribution to the genus *Anomala* Samouelle, 1819 of China and adjacent regions. Part II: six new species from Taiwan and Hainan. *Zootaxa*, 5168(2): 175–195. DOI: 10.11646/zootaxa.5168.2.5
- Zorn, C. 2005. Taxonomical acts initiated during the preparation of the part of Rutelinae, tribe Anomalini (Coleoptera: Scarabaeidae) of the “Catalogue of Palaearctic Coleoptera”. *Acta Societatis Zoologicae Bohemicae*, 68: 301–328.

---

© **Far Eastern entomologist (Far East. entomol.)** Journal published since October 1994.

Editor-in-Chief: S.Yu. Storozhenko

Editorial Board: A.S. Lelej, S.A. Belokobylskij, M.G. Ponomarenko, V.A. Mutin, E.A. Beljaev, E.A. Makarchenko, A.V. Gorochov, T.M. Tiunova, M.Yu. Proshchalykin, S.A. Shabalin, V.M. Loktionov

Address: Federal Scientific Center of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Far East Branch of the Russian Academy of Sciences, 690022, Vladivostok-22, Russia.

E-mail: storozhenko@biosoil.ru

web-site: <http://www.biosoil.ru/fee>