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A REVIEW OF THE PALEARCTIC SPECIES OF THE GENUS *BRACHYSERPHUS* HELLEN (HYMENOPTERA, PROCTOTRUPIDAE), WITH DESCRIPTION OF TWO NEW SPECIES FROM RUSSIAN FAR EAST

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A review of the genus *Brachyserphus* with description of *B. striatopropodeatus* sp. n. and *B. nudipleuralis* sp. n. from Russian Far East, and with key to Palearctic species is given.

KEY WORDS: Proctotrupidae, *Brachyserphus*, taxonomy, new species, key, Palearctic, Russian Far East.

В.А.Коляда. Обзор палеарктических видов рода *Brachyserphus* Hellen (Hymenoptera, Proctotrupidae) с описанием двух новых видов с Дальнего Востока России // Дальневосточный энтомолог. 1997. N 49. С. 1-6.

Дан обзор рода *Brachyserphus* с описанием *B. striatopropodeatus* sp. n. и *B. nudipleuralis* sp. n. с Дальнего Востока и определительной таблицей палеарктических видов.

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INTRODUCTION

The genus *Brachyserphus* numbers 13 species (including two new ones described below), which are distributed mainly in the Northern hemisphere (Townes, 1981). Up to now only two Palearctic species of *Brachyserphus* were known (Kozlov, 1978; Townes & Townes, 1981; Johnson, 1992): extremely rare European *B. laeviceps* (Thomson) and widely distributed Holarctic *B. parvulus* (Nees). I found two new species from Russian Far East. The present study is based on the collections of the Zoological Institute of the Russian Academy of Sciences, St.Petersburg (ZIS,) and the Zoological Museum of Moscow State University (ZMMU). The names of collectors are abbreviated as follow: B - S.A.Belokobylsky, K - D.R.Kasparyan, T - V.I.Tobias. One hundred forty specimens were studied. Body length measured from the frons to the end of syntergite.

GENUS *BRACHYSERPHUS* HELLEN, 1941

Brachyserphus Hellen, 1941, Notulae Ent., 21: 42.

Type species – *Codrus parvulus* Nees, 1834, by original designation.

REMARKS. The species of the genus *Brachyserphus* are identified with difficulties because of large variability of characters. True identification is possible when long series of specimens are used. Males are still practically undeterminable, and females only are keyed below.

Key to the Palearctic species of *Brachyserphus*

1. Propodeum with large longitudinal wrinkles behind spiracle (Fig. 1). Apex of ovipositor sheath smoothly rounded apico-ventrally (Fig. 8). Ovipositor sheath 0.88 times as long as hind tibia ***B. striatopropodeatus* sp. n.**
- Propodeum with usual reticulation behind spiracle, sometimes reticulation obliterated. Apex of ovipositor sheath more or less acuminate apico-ventrally (Figs 4-7, 9) 2
2. Metapleuron lacking of supracoxal ridge (Fig. 2). Ovipositor sheath 0.55-0.6 times as long as hind tibia (Fig. 7) ***B. nudipleuralis* sp. n.**
- Metapleuron with developed supracoxal ridge (Fig. 3), sometimes in apical one third only 3
3. Ovipositor sheath markedly widened in apical half (Fig. 9) ***B. laeviceps***
- Ovipositor sheath not widened in apical half (Figs 4-6) ***B. parvulus***

***Brachyserphus parvulus* (Nees, 1834)**

Figs 3-6

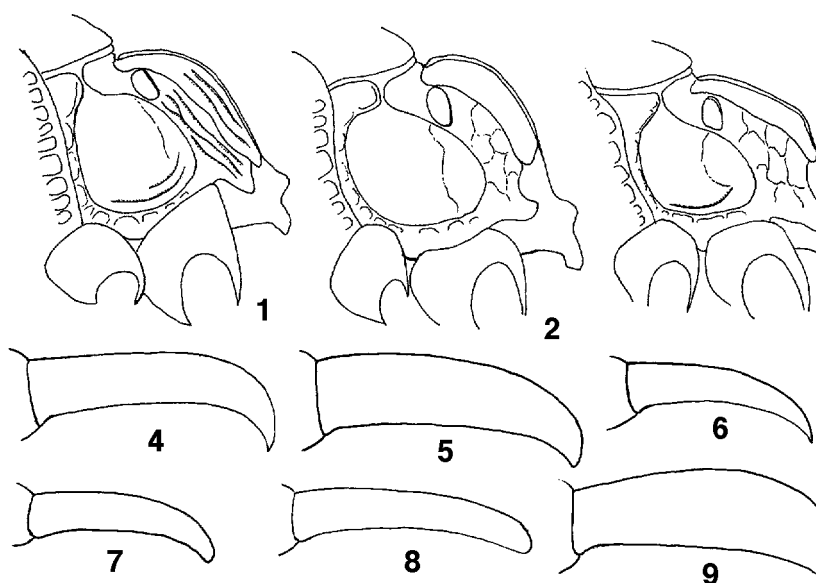
Codrus parvulus Nees, 1834, Hymenopterorum ichneumonibus affinium monographiae, 2: 360 (♂ ♀).

MATERIAL. **Russia:** *European part:* Moscow, 15.IX 1994, 19.V 1996, 2 ♀ (Kolyada, Blonski); Moskovskaya oblast': Stupino, 10.X 1994, 1 ♂ (Kolyada);

Yaroslavskaya oblast': Yaroslavskij ujezd, Berditsyno, 23.VII 1897, 1 ♀ (A. Yakovlev); Novgorodskaya oblast': 20 km NW Pestovo, 14.VII 1991, 1 ♀ (T); Arkhangelskaya oblast': 25 km SE Arkhangelsk, 7.VIII 1977, 1 ♂ (K); Murmanskaya oblast': Murmansk, 12.VIII 1923, 2 ♀ (Fridolin); Seidozero 10 km S Lovozero, 24.VII 1974, 1 ♀ (K); Permskaya oblast': Lysva Distr., Kamenka, 5.VIII 1963, 1 ♂ (Zherikhin); Krasnodarskii krai: Sochi, Lazorevskoje, 11-16.IX 1981, 1 ♀ (T); **Siberia:** Buryatia, Kyakhta, Dungaj, Kudara-somon, 8-9.VIII 1973, 1 ♀ (K); **Far East:** Amurskaya oblast': Zeya Reserve, cordon 52 km, 2.IX 1981, 1 ♀ (Alekseev); Khabarovskii krai: Amur River, Udyal Lake, 23, 29-31.VIII 1970, 2 ♀ (K); Khekhzir Mts, 28-30.VII 1983, 1 ♂ (K); Primorskii krai: Vladivostok, Akademgorodok, 18.VI 1972, 1 ♀ (Kozlov); Vladivostok, 11.IX 1982, 2 ♀ (T), 29-30.VIII 1985, 1 ♀ (T), 4-5.IX 1985, 1 ♀ (T), 24.VIII 1988, 3 ♀ (B); Volno-Nadezhdinskoe, 4.VII 1996, 1 ♂ (B); 15 km NW Artem, 6-7.IX 1988, 7 ♀ (B); 20 km SE Ussurijsk, GTS, 28-31.VIII 1978, 2 ♀ (K), 2-5.VIII. 1991, 3 ♀ (B); Ussuriiskii Reserve, 26-30.VII 1972, 2 ♀ 1 ♂ (Kozlov); 10 km SE Chernigovka, 27-29.VII 1996, 1 ♂ (B); 30 km NW Spassk, 10.IX 1981, 3 ♀ 8 ♂ (B); Spassk, 19-23.VIII 1987, 1 ♀ (B), 15-16.IX 1987, 1 ♀ (B), 11-22.IX 1988, 7 ♀ (B), 17-19.VIII 1991, 8 ♀ 6 ♂ (B), 10-13.VII 1993, 1 ♀ (B), 17-21.VI 1996, 1 ♂ (B), 25.VII 1996, 1 ♀ (B); 40 km E Chuguevka, 23-25.VIII 1978, 1 ♂ (K); Lazo Reserve, Ta-Chingouz, 16.IX 1948, 1 ♀ (Gussakovskij); Molchanovsk, 18.VI-1.VII 1972, 1 ♀ (Kozlov); 10 km SW Sokolcha, 22-24.VII 1993, 1 ♂ (B); 15 km NWW Partizansk, Fridman, 28.VI 1996, 1 ♂ (B); 15 km NE Partizansk, Frolovka, 7-8.VII 1996, 1 ♂ (B); 20 km NNE Partizansk, 10.VII 1996, 1 ♂ (B); 10 km SSW Partizansk, 13.VII 1996, 1 ♀ (B); Anisimovka, 11-13.IX 1978, 2 ♀ 1 ♂ (K), 4.IX 1982, 3 ♀ (T), 4-5.IX 1988, 1 ♀ (B), 10.VIII 1991, 4 ♂ (B), 5-9.VII 1993, 1 ♀ 1 ♂ (B); Novokachalinsk, 29.VIII 1987, 1 ♀ (B), 21-23.VII 1995, 1 ♂ (B); Barabash-Levada, 2-4.IX 1978, 1 ♀ (K); Kedrovaya Pad' Reserve, 21-23.IX 1978, 1 ♀ (Zinovjev); 15 km SW Slavyanka, 16.VI 1993, 1 ♀ (B); Khasan, 11.VIII 1984 (Kirejchuk); Sakhalinskaya oblast': Sakhalin I., Novoaleksandrovka near Yuzno-Sakhalinsk, 7.IX 1973, 4 ♀ (K), 13-14.VII 1981, 1 ♂ (B); Iturup I., Kurilsk, 22.VIII 1973, 2 ♀ (K); Kunashir I., Golovnina Mt., 24-26.VII 1973, 1 ♀ 1 ♂ (K), 25-27.VII 1981, 1 ♀ (B); Kamchatskaya oblast': Kozyrevsk, 12-24.VII 1985, 3 ♂ (B). **Georgia:** Sukhumi, 30.IX 1932, 1 ♀ (Belizin); Borjomi, 19-22.VII 1981, 1 ♀ (Gurasashvili).

DISTRIBUTION. Europa, North America (Townes & Townes, 1981), European Part of Russia (Kozlov, 1978), Russian Far East, Georgia.

VARIABILITY. The species is very variable in some characters, especially in the Eastern Palearctic. Length of body 1.8 to 3.0 mm. Length of fore wing 1.8 to 3.0 mm. Ratio of ovipositor sheath to hind tibia length 0.62 to 0.65. Propodeal reticulation behind spiracle fine to coarse; number of hairs on each of dorsal lateral areas of propodeum 15 to 30. Ovipositor sheath shape varies too (Figs 4-6), but forms as in Figs. 5 and 6 are found in Russian Far East only.



Figs. 1-9. *Brachyserphus* ssp. 1-3) - female propodeum laterally: 1) *B. striatopropodeatus* sp. n.; 2) *B. nudipleuralis* sp. n.; 3) *B. parvulus*; 4-9) ovipositor sheath laterally: 4-6) *B. parvulus*; 7) *B. nudipleuralis* sp. n.; 8) *B. striatopropodeatus* sp. n.; 9) *B. laeviceps*.

***Brachyserphus laeviceps* (Thomson, 1857)**

Fig. 8

Proctotrupes laeviceps Thomson, 1857, Ofvers. Svenska Vetensk. Akad. Forh., 14: 416 (♂ ♀).

MATERIAL. Russia: European part: Yaroslavskaya oblast': Berditsyno, 24.VIII 1894, 1 ♀ (A. Yakovlev); Moskovskaya oblast': Pavlovskaya Sloboda, 1.VII 1995, 2 ♀ 2 ♂ (Kolyada).

MEASUREMENTS. Length of body 2.8 mm; length of fore wing 2.8 mm. Ratio of ovipositor sheath to hind tibia length 0.8.

DISTRIBUTION. North and Central Europe (Townes & Townes, 1981; Zetel, 1991), Middle European Part of Russia (Kozlov, 1978). Rare species.

***Brachyserphus striatopropodeatus* Kolyada, sp. n.**

Figs 1, 8

MATERIAL. Holotype – ♀, Russia: Primorskii krai: Anisimovka, 4-5.IX 1988 (B). Paratypes – Primorskii krai: Anisimovka, 4-5.IX 1988, 1 ♀ (B); Vladivostok, 24.VIII 1988, 1 ♀ (B). Also 1 ♀ with label " Primorskii krai, Khasan, 5.X 1980 (Kupyanskaja)" (specimen with destroyed antennae and body immersed in glue). Holotype and one paratype are deposited in ZIS, another paratype and specimen not included in type series in ZMMU.

DESCRIPTION. Female. Antennae short, length to width ratio of second flagellomere 2.0-2.25. Fore margin of clypeus simple, not duplicate. Pronotum behind dorsolateral tubercle smooth, without wrinkles, rarely with very fine horizontal ones. Notauli of same length as tegula. Metapleuron with supracoxal ridge in hind 2/3. Propodeum with strong longitudinal wrinkles just behind spiracle and on apical area of dorsum. Number of hairs on each of dorsal lateral areas of propodeum approx. 30. Ratio of ovipositor sheath to hind tibia length 0.88. Apex of ovipositor sheath wide rounded from beneath, with hairs on its lower surface approx. 0.25 as long as sheath high. Color. Body black. Antennae and coxae black to dark brown. Labrum, mandibles, tegula, legs brown to light brown. Length of body 2.2-2.6 mm; length of fore wing 2.2-2.5 mm.

Male unknown.

COMPARISON. Similar to Nearctic *B. lucens* (Provancher, 1883) in shape of ovipositor sheath. Differs from *B. lucens* and other species by distinctive longitudinal striation of propodeum.

DISTRIBUTION. Russia: Primorskii krai.

***Brachyserphus nudipleuralis* Kolyada sp. n.**

Figs 2, 7

MATERIAL. Holotype – ♀, Russia: Primorskii krai: Anisimovka, 5-9.VII 1993 (B). Paratypes – Primorskii krai: Anisimovka, 26-27.VI 1996, 1 ♀ (B); Vladivostok, 3.VII 1996, 1 ♀ (B); 20 km SE of Ussurijsk, Gornotayozhnoe 4-5.VIII 1991, 1 ♂ (B); Sakhalinskaya oblast': Kunashir I., 5.IX 1976, 2 ♀ (L. Danilovich); Kunashir I., Tretyakovo 3-10.VIII 1973, 1 ♀ (K). Holotype and part of paratypes are deposited in ZIS, other paratypes in ZMMU.

DESCRIPTION. Female. Antennae short, length to width ratio of second flagellomere 1.67-2.0. Fore margin of clypeus simple, not duplicated. Pronotum behind dorsolateral tubercle smooth, without wrinkles. Notauli as long as tegula. Metapleuron without supracoxal ridge. Propodeum just behind spiracle and on apical area of dorsum finely reticulate. Number of hairs on each of dorsal lateral areas of propodeum approx. 30. Ratio of ovipositor sheath to hind tibia length 0.55-0.6. Ovipositor sheath quite narrow, with hairs on its lower surface, one third as long as ovipositor sheath high. Color. Body black. Antennae, labrum, mandibles, tegula, coxae black or blackish, legs light to dark brown. Length of body 1.7-2.5 mm; length of fore wing 1.7-2.4 mm.

Male. Characters as in female. Length of body 1.9 mm; length of fore wing 1.9 mm.

COMPARISON. New species differs from all Palearctic species by absence of supracoxal ridge.

DISTRIBUTION. Russia: Primorskii krai, Sakhalinskaya oblast' (Kuril Is.: Kunashir).

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REFERENCES

- Johnson, N.F. 1992. Catalog of World species of Proctotrupeoidea, exclusive of Platygasteridae (Hymenoptera). – Memoirs of the American Entomological Institute 51: 1-825.
- Kozlov, M.A. 1978. [Fam. Proctotrupidae]. In: Medvedev, G.S. (Ed.). Opredelitel' nasekomykh evropeiskoi chasti SSSR. [A key to the insects of the European Part of the USSR]. Nauka Publ., Leningrad. 3(2): 543-548 (in Russian).
- Townes, H.K. & Townes, M.C. 1981. A revision of the Serphidae (Hymenoptera). – Memoirs of the American Entomological Institute 32: 1-541.
- Zetel, H. 1991. Zur Serphiden-Fauna Karintens. – Carinthia 101(2): 315-319.

SHORT COMMUNICATION

Degma P. RESULTS OF THE EXPEDITION “USSURI '95”: SCARABAEOIDEA (COLEOPTERA) - Far Eastern Entomologist. 1997. N 49 : 6-8.

П. Дегма. Результаты экспедиции “Ussuri '95”: Scarabaeoidea (Coleoptera) // Дальневосточный энтомолог. 1997. N 49. С. 6-8.

The student organisation LENS (Bratislava, Slovakia) realized the expedition “Ussuri '95”. Students visited Russian Far East from June to September 1995. The scarab and lucanid beetles were collected from 16 following localities: **Primorskii krai:** **1** - Vladivostok, 4-6.VI; **2** - Ussuriiskii Reserve, 7-22.VI; **3** - Kedrovaya Pad' Reserve, 22-27.VI; **4** - Ryazanovka, 27.VI-8.VII; **5** - Barabash-Levada, 11-16.VII; **6** - Kamen'-Rybolov, 16-18.VII; **7** - Frolovka River, 19-25.VII; **8** - Anisimovka, 25.VII-2.VIII; **9** - 7 km SE from Anisimovka, 2-4.VIII; **10** - Sikhote-Alinskii Reserve, Serebryanka River, 12-19.VIII; **11** - W border of Sikhote-Alinskii Reserve, 18.VIII; **12** - Kolumbe River, 20-23.VIII; **13** - Armu River, 28.VIII; **14** - Baranovskii volcano, 4.IX; **Sakhalin I.:** **15** - 7 km S from Kholmsk, 10.IX; **16** - Moskalvo, 16-18.IX. Fifty eight species (1048 specimens) were identified using the keys [1-4]. *Aphodius rectus*, *Caccobius sordidus*, *Onthophagus uniformis*, *Sericania fuscolineata*, *Holotrichia sichotana*, *H. diomphalia*, *Ectinohoplia rufipes*, *Lasiotrichius succinctus*, *Gnorimus subopacus*, *Oxycetonia jucunda* and *Cetonia magnifica* were the most common species.

I am obliged to the International Natural Science Organisation and LENS for the possibility to participate on the project "Ussuri '95". I thank Dr. I. Rychlik (Philosophical faculty, Bratislava, Slovakia) for the consultation delth with a few specimens of Aphodiinae and F.Ciampor, T.Nulik, A.Sutek and P.Vrsansky for collecting of the beetles.

LIST OF SPECIES WITH LOCALITIES

Family Lucanidae

1. *Lucanus maculifemoratus dybowskyi* Parry - 9.
2. *Prismognathus subaeneus* Motsch. - 9, 13.
3. *Macrodercas rubrofemoratus* Vollenhoven - 8, 13.

Family Scarabaeidae

Subfamily Geotrupinae

4. *Geotrupes amoenus* Jacobs. - 2, 4, 5.
5. *G. auratus* Motsch. - 3, 4.

Subfamily Aphodiinae

6. *Aphodius (Colobopterus) propraetor* Balth. - 2, 4, 5, 6.
7. *A. (Colobopterus) notabilipennis* Petrovitz - 5.
8. *A. (Sinodiapterna) troitzkyi* Jacobs. - 4, 14.
9. *A. (Otophorus) haemorrhoidalis* L. - 6.
10. *A. (Acrossus) arsenjevi* Berlov - 2, 4.
11. *A. (Acrossus) binaevulus* Heyd. - 7.
12. *A. (Aphodaulacus) koltzei* Rtt. - 2, 5.
13. *A. (Phaeaphodius) rectus* Motsch. - 1, 2, 5, 8.
14. *A. (Orodalus) pusillus* Herbst - 2, 4, 6.
15. *A. (Acanthobodilus) languidulus* A. Schm. - 6.
16. *A. (Calamosternus) sublimbatus* Motsch. - 2, 3, 4, 5, 6, 9.
17. *A. (Nialus) sturmi* Har. - 6.

Subfamily Scarabaeinae

18. *Sisyphus schaefferi* L. - 5, 6.
19. *Copris ochus* Motsch. - 4.
20. *Caccobius (Caccobius) brevis* Waterh. - 14.
21. *C. (Caccophilus) sordidus* Har. - 2, 4, 5, 6, 7, 14, 16.
22. *C. (Caccophilus) christophi* Har. - 2, 4, 5, 7, 8.
23. *C. (Caccophilus) kelleri* Olsoufieff - 2.
24. *Onthophagus (Gibbonthophagus) atripennis* Waterh. - 2, 7.
25. *O. (Phanaeomorphus) fodiens* Waterh. - 4.
26. *O. (Onthophagus) bivertex* Heyd. - 4, 5.
27. *O. (Onthophagus) uniformis* Heyd. - 2, 3, 7, 8, 10.
28. *O. (Onthophagus) gibbulus* Pall. - 6, 14.

Subfamily Rutelinae

29. *Popillia quadriguttata quadriguttata* F. - 5, 7.
30. *Rhombonyx holosericea* F. - 7, 9, 10, 12, 13, 15.
31. *Rhombonyx testaceipes ussuriensis* S. Medv. - 9.
32. *Proagopertha lucidula* Fald. - 2.
33. *Phyllopertha horticola* L. - 4, 5.
34. *Anomala (Anomala) ogloblini* S. Medv. - 10.
35. *A. (Anomala) luculenta* Er. - 5, 7.
36. *Blitopertha (Exomala) pallidipennis* Rtt. - 5, 7, 8, 9.

Subfamily Sericinae

- 37. *Maladera (Aserica) castanea* Arrow - 9.
- 38. *M. (Aserica) orientalis* Motsch. - 4.
- 39. *M. (Maladera) renardi* Ballion - 1, 2, 4.
- 40. *Sericania fuscolineata* Motsch. - 1, 2, 3, 4, 7.
- 41. *S. ussuriensis* S. Medv. - 2.
- 42. *Trichoserica polita* Gebl. - 8, 9.
- 43. *Pseudomaladera koltzei* Rtt. - 4.
- 44. *Ophthalmoserica rosinae* Pic - 7, 9.

Subfamily Rhizotroginae

- 45. *Lasiopsis (Lasiopsis) golovjankoi* S. Medv. - 7.
- 46. *Holotrichia sichotana* Brenske - 1, 2, 3, 7, 8, 9.
- 47. *H. diomphalia* Bat. - 1, 2, 3, 8.

Subfamily Hopliinae

- 48. *Ectinohoplia rufipes* Motsch. - 4, 7, 8.
- 49. *Hoplia (Euchromoplia) aureola* Pall. - 5.

Subfamily Trichiinae

- 50. *Trichius fasciatus* L. - 7, 9, 10, 11.
- 51. *Lasiotrichius succinctus* Pall. - 2, 3, 4, 5, 7, 9, 10.
- 52. *Gnorimus subopacus* Motsch. - 2, 3, 5, 7.

Subfamily Cetoniinae

- 53. *Oxycetonia jucunda* Fald. - 2, 4, 5, 8, 9, 10, 14.
- 54. *Glycyphana fulvitemma* Motsch. - 2, 5, 9.
- 55. *Cetonia (Eucetonia) magnifica* Ballion - 2, 4, 5, 6, 7, 9.
- 56. *Netocia (Liocola) lugubris orientalis* S. Medv. - 2, 7, 11.
- 57. *N. (Liocola) brevitarsis* Lew. - 4, 5.
- 58. *N. (Potosia) metallica* Herbst - 5, 11.

1. Balthasar, V. 1963-1964. Monographie der Scarabaeidae und Aphodiidae der palaearktischen und orientalischen Region. Verlag der Tschechoslowakischen Akademie der Wissenschaften, Prag. 1963, 1: 391 pp.; 1963, 2: 627 pp.; 1964, 3: 652 pp.

2. Berlov, E.Ya. 1996. Scarabaeidae - plastintshatousye. Dopolnenie 1. Opredelitel' nasekomykh Dal'nego Vostoka Rossii. Dal'nauka Publ., Vladivostok. 3(3): 415 (in Russian).

3. Berlov, E.Ya., Kalinina, O.I., Nikolajev, G.V. 1989. Scarabaeidae - plastintshatousye. Opredelitel' nasekomykh Dal'nego Vostoka SSSR. Nauka Publ., Leningrad. 3(1): 380-434 (in Russian).

4. Medvedev, S.I. 1949-1964. Plastintshatousye (Scarabaeidae). Fauna SSSR, Zhestkokrylye. Izdatel'stvo Akademii nauk SSSR, Moscow-Leningrad. 1949, 10(3): 371 pp.; 1951, 10(1): 512 pp.; 1952, 10(2): 274 pp.; 1960, 10(4): 397 pp.; 1964, 10(5): 375 pp. (in Russian).

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