

To the study of gnaphosid spiders (Aranei: Gnaphosidae) of Western Azerbaijan with suggestion of two new synonyms

К изучению пауков гнафозид (Aranei: Gnaphosidae) Западного Азербайджана с предложением двух новых синонимов

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KEY WORDS: Araneae, Caucasus, Ganja-Gazakh Region, new record, new synonym.

КЛЮЧЕВЫЕ СЛОВА: Araneae, пауки, Кавказ, новое указание, новый синоним.

ABSTRACT. Twenty five species of ground spiders were found in Ganja-Gazakh Region of Azerbaijan, eighteen (18) of which are new records for the fauna of the studied area. Of these two species, *Drassyllus villicus* (Thorell, 1875) and *Zelotes aeneus* (Simon, 1878) are reported for the first time for the faunas of Caucasus and Azerbaijan respectively. Synonymy of *Talanites aculeatus* Charitonov, 1946 under *Berinda amabilis* Roewer, 1928 is rejected. Instead, a new synonymy *Anagraphis pallens* Simon, 1893 = *Talanites aculeatus* Charitonov, 1946 syn.n. is proposed. *Prosthesima semibadia* L. Koch, 1878 (= *Zelotes semibadius* (L. Koch, 1878)), syn.n. is synonymized with *Trachyzelotes jaxartensis* (Kroneberg, 1875).

РЕЗЮМЕ. Двадцать пять видов пауков семейства Gnaphosidae обнаружены на территории Гянджа-Казахского региона Азербайджана, из которых 18 видов впервые указываются для фауны исследуемого региона. Два вида *Drassyllus villicus* (Thorell, 1875) и *Zelotes aeneus* (Simon, 1878) являются новыми для фаун Кавказа и Азербайджана соответственно. Синонимия *Talanites aculeatus* Charitonov, 1946 с *Berinda amabilis* Roewer, 1928 отвергается. Вместо этого предлагается новая синонимия *Anagraphis pallens* Simon, 1893 = *Talanites aculeatus* Charitonov, 1946 syn.n. Также вид *Prosthesima semibadia* L. Koch, 1878 (= *Zelotes semibadius* (L. Koch, 1878)), syn.n. синонимизирован с *Trachyzelotes jaxartensis* (Kroneberg, 1875).

Introduction

Among the Republics of the former Soviet Union Azerbaijan is relatively well studied in respect to spider fauna. According to the recent catalogue by Mikhailov [2013] it comprises 663 species from 42 families. Gnaphosidae is one of the most species rich

families in Azerbaijan (with over 70 properly identified species) with only Salticidae (over 80 species) and Linyphiidae (over 90 species) being more diverse [Mikhailov, 2013]. However, different regions of Azerbaijan are studied unevenly in respect to gnaphosids (as well as other spider families). The areas that support the high number of gnaphosid species are Absheron Peninsula (38 species) [Dunin, 1984; Guseinov, 1999] Nakhchyvan (29) [Marusik et al., 2005], Sheki-Zagatala area (28) [Dunin, 1989; Huseynov et al., 2003], Lenkoran area (27) [Guseinov, 1999], and Gobustan (27) [Alieyva, 2010; Nuruyeva, Guseinov, 2011].

This paper concerning gnaphosids of Ganja-Gazakh region of Azerbaijan, presents some results of our investigation of this poorly studied area. Despite the large area, little is known about araneofauna of this territory compared to some other regions of Azerbaijan (see above mentioned). Up to date, about 80 species of spiders from 21 families were recorded from Ganja-Gazakh region, 13 of which belong to Gnaphosidae [Khasayeva, 2014]. All these records were provided by Ovtsharenko, who firstly reported 12 gnaphosid species from genera *Callilepis* Westring, 1874, *Drassyllus* Chamberlin, 1922, *Gnaphosa* Latreille, 1804, *Haplo-drassus* Chamberlin, 1922, *Nomisia* Dalmas, 1921, *Talanites* Simon, 1893, *Trachyzelotes* Lohmander, 1944, *Zelotes* Gistel, 1848 [Ovtsharenko, 1982] and then added one more species *Gnaphosa steppica* Ovtsharenko, Platnick et Song, 1992 [Ovtsharenko et al., 1992]. Later, Tuneva & Eyunin [2003] have concluded that the last record refers to a new species *Gnaphosa azerbaijanica* Tuneva et Eyunin, 2003.

Material and Methods

Most of material treated herein was collected by authors during short-term trips to different points in

Agstafa, Gazakh, Tovuz, Shamkir, Gyoy-gyol, Dashkesan, Gedabey and Goranboy districts of Ganja-gazakh Region in 2014–2016. Specimens were collected by litter sifting, pitfall trapping and hand picking. Collected spiders were preserved in 70% ethanol and brought back to the laboratory, where they were identified under a NÝKON SMZ 1270 stereomicroscope. Digital images of the palps and epigynes were taken with a digital camera SONY DSC – P8. The studied material is deposited in the collection of Institute of Zoology, Azerbaijan National Academy of Sciences, Baku. The species new to the fauna of Ganja-Gazakh Region are marked with one asterisk “*”, species new to Azerbaijan are marked with two asterisks “**”, and species new to the fauna of Caucasus are indicated by three asterisks “***”. Collector's names are abbreviated as follows: EH — E.F. Huseynov; SKh — S.I. Khasayeva.

Species survey

Anagraphis Simon, 1893

Anagraphis pallens Simon, 1893

Figs 1–8.

Anagraphis pallens Levy, 1999: 216, f. 1–7 (♂♀); Chatzaki et al., 2002: 567, f. 2–7 (♂♀); Murphy, 2007: 41, f. 230–231 (♂♀).

Talanites aculeatus Charitonov, 1946: 26, f. 43 (♂), **syn.n.**
MATERIAL. 2 ♂♂, 1 ♀, Goranboy Dist., 13.05.15 (EH).

DISTRIBUTION. Mediterranean to Central Asia [Levy, 1999; Chatzaki et al., 2002; Mikhailov, 2013, see below]. Record from South Africa is apparently erroneous [Platnick, Baehr, 2006].

REMARK. Record of *A. pallens* could be formally considered as a new for Azerbaijan and the Caucasus as a whole. However, this species has been repeatedly reported from different parts of Azerbaijan under the name *Talanites aculeatus* Charitonov, 1946 [Ovtsharenko, 1982; Dunin, 1984; Guseinov, 1999]. Recently Chatzaki et al. [2002] have synonymized *T. aculeatus* with *Berinda amabilis* Roewer, 1928. Yet, by palpal conformation *T. aculeatus* has nothing in common with *B. amabilis* (see fig. 43 [Charitonov, 1946] vs. fig. 12–13 [Chatzaki et al., 2002]), while, on the other hand, it is very similar to the type-species of the genus *Anagraphis* Simon, 1893, *A. pallens* (cf. fig. 3 [Levy, 1999]). According to description by Charitonov [1946], *T. aculeatus* also differs significantly from *B. amabilis* by coloration, absence of scutum in males, leg spination and chelicerae dentition and lacking a preening comb on third and fourth metatarsi. Chelicerae of *B. amabilis* bear 2 anterior and 3 posterior teeth [Chatzaki et al., 2002], while *T. aculeatus*, in contrast, has 3 anterior and 2 posterior teeth on chelicerae [Charitonov, 1946]. The latter formula is characteristic of *A. pallens* [Levy, 1999]. Taking into account the above mentioned, we reject synonymy of *T. aculeatus* with *B. amabilis* and, instead, propose a new synonymy *Talanites aculeatus* Charitonov, 1946, **syn.n.** = *Anagraphis pallens* Simon, 1893.

Aphantaulax Simon, 1878

Aphantaulax trifasciata (O. Pickard-Cambridge, 1872)*

MATERIAL. 1 ♀, Gazakh Dist., Khanliglar Vil., 24.08.2015 (SKh).

DISTRIBUTION. From Europe to Central Asia [Mikhailov, 2013, Helsdingen, 2014].

Drassodes Westring, 1851

Drassodes lapidosus (Walckenaer, 1802)*

MATERIAL. 1 ♀, Agstafa Dist., Poylu Vil., 19.05.2012 (N.Y. Snegovaya); 1 ♀, Goranboy Dist., env. of Goranboy Town, 14.05.2015 (EH); 3 ♀♀, Gedabey Dist., Novo-saratovka Vil., 25.07.2015 (EH); 1 ♂, Tovuz Dist., Esrik vil., 8.08.2016 (SKh).

DISTRIBUTION. West Palearctic [Mikhailov, 2013; Helsdingen, 2014].

Drassodes pubescens (Thorell, 1856)*

MATERIAL. 1 ♂, 1 ♀, Gedabey Dist., Novo-saratovka Vil., 25.07.2015 (EH); 1 ♀, Dashkesan Dist., Khoshbulag Vil., 26.06.2016 (SKh).

DISTRIBUTION. Trans-palearctic range [Mikhailov, 2013; Helsdingen, 2014].

Drassyllus Chamberlin, 1922

Drassyllus praeficus L. Koch, 1866*

MATERIAL. 4 ♂♂, env. of Agstafa Town, 29.04–6.06.2014 (SKh); 1 ♀, Tovuz Dist., Esrik-Jirdakhan Vil., 8.08.2016 (SKh).

DISTRIBUTION. West Palearctic [Mikhailov, 2013; Helsdingen, 2014].

Drassyllus villicus (Thorell, 1875)***

MATERIAL. 1 ♂, Agstafa Dist., env. of Agstafa Town, 29.04.2014 (SKh).

DISTRIBUTION. European species [Helsdingen, 2014].

REMARK. The new record from Azerbaijan is easternmost range of the species.

Gnaphosa Latreille, 1804

Gnaphosa leporina (L. Koch, 1866)*

MATERIAL. 1 ♂, Agstafa Dist., Ashagy Kesemen Vil., 14.12.2013 (SKh); 1 ♂, 3 ♀♀, env. of Agstafa Town, 29.04–6.06.2014 (SKh).

DISTRIBUTION. West Palearctic [Mikhailov, 2013; Helsdingen, 2014].

Gnaphosa modestior Kulczyński, 1897*

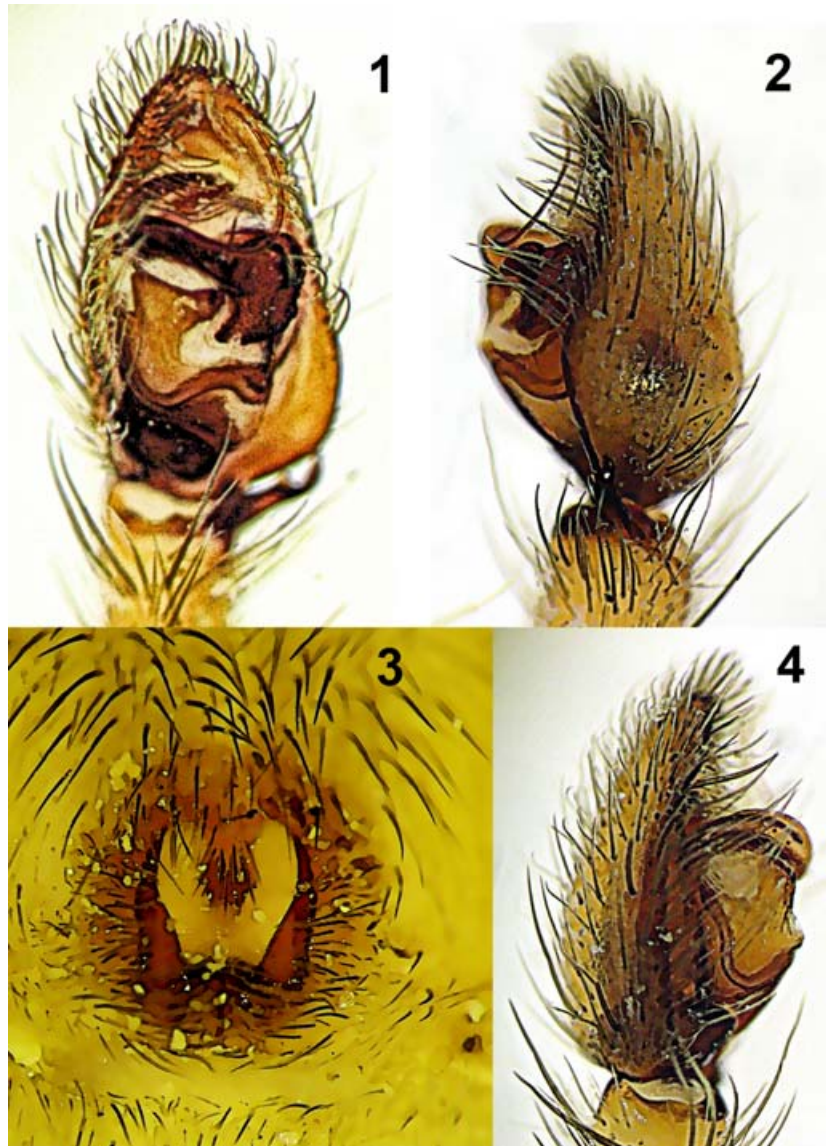
MATERIAL. 1 ♂, 1 ♀, Dashkesan Dist., Khoshbulag Vil., 26.06.2016 (SKh).

DISTRIBUTION. West Palearctic [Komnenov et al., 2016]

Gnaphosa taurica Thorell, 1875*

MATERIAL. 1 ♀, Dashkesan Dist., Khoshbulag Vil., 26.06.2016 (SKh).

DISTRIBUTION. East Europe to West Siberia [Kovblyuk, 2005; Mikhailov, 2013].



Figs 1–4. *Anagraphis pallens* from Goranboy: 1, 2, 4 — male palp, ventral, retrolateral and prolateral; 3 — epigyne.

Рис. 1–4. *Anagraphis pallens* из Гёранбоя: 1, 2, 4 — палпа самца, вентрально, ретролатерально и пролатерально; 3 — эпигина.

Haplodrassus Chamberlin, 1922

Haplodrassus dalmatensis (L. Koch, 1866)*

MATERIAL. 7 ♂♂, env. of Agstafa Town, 29.04.2014 (SKh); 1 ♀, Shamkir Dist., Seyfeli Vil., 24.08.2015 (SKh).

DISTRIBUTION. West Palearctic [Mikhailov, 2013; Helsdingen, 2014].

Haplodrassus signifer (C.L. Koch, 1839)

MATERIAL. 1 ♂, Tovuz Dist., Khatynly Vil., 11.05.2014 (SKh); 1 ♀, Gazakh Dist., Khanliglar Vil., 19.05.2016 (SKh).

DISTRIBUTION. Circum-Holarctic range [Marusik et al., 2000].

Micaria Westring, 1851

Micaria albovittata (Lucas, 1846)*

MATERIAL. 1 ♀, Gedabey Dist., Saratovka Vil., 25.07.2015

(EH); 1 ♂, 1 ♀, Dashkesan Dist., Khoshbulag Vil., 26.06.2016 (SKh).

DISTRIBUTION. Palearctic species [Chatzaki et al., 2002; Mikhailov, 2013].

Micaria rossica Thorell, 1875*

MATERIAL. 2 ♀♀, Agstafa Dist., env. of Agstafa Town, 29.04.2014 (SKh).

DISTRIBUTION. Trans-Palaearctic – West-Nearctic range [Kovblyuk, Nadolny, 2008].

Nomisia Dalmas, 1921

Nomisia conigera (Spassky, 1941)

MATERIAL. 1 ♀, Goranboy Dist., env. of Goranboy Town, 12.05.2015 (EH).

DISTRIBUTION. Turkey, Azerbaijan, Central Asia [Chatzaki, 2010; Mikhailov, 2013].



Figs 5–8. *Anagraphis pallens* from Absheron: 5, 6 — male palp, ventral; 7 (male), 8 (female) — general appearance.
Рис. 5–8. *Anagraphis pallens* из Апшерона: 5, 6 — пальпа самца вентрально; 7 (самец), 8 (самка) — внешний вид.

Nomisia exornata (C.L. Koch, 1839)

MATERIAL. 1 ♂, Shamkir Dist., Seyfeli Vil., 24.08.2015 (SKh); 3 ♂♂, Tovuz Dist., Esrik-Jirdakhan Vil., 8.08.2016 (SKh).

DISTRIBUTION. Europe to Central Asia [Chatzaki, 2010; Mikhailov, 2013; Helsdingen, 2014].

Nomisia ripariensis (O. Pickard-Cambridge, 1872)*

MATERIAL. 1 ♂, Gazakh Dist., Khanliglar Vil., 24.08.2015 (SKh).

DISTRIBUTION. East Mediterranean to Caucasus [Chatzaki, 2010; Mikhailov, 2013].

Trachyzelotes Lohmander, 1944

Trachyzelotes barbatus (L. Koch, 1866)*

MATERIAL. 1 ♀, Tovuz Dist., Esrik-Jirdakhan Vil., 2016 (SKh).

DISTRIBUTION. From West Mediterranean to Central Asia, introduced to USA [Kovblyuk, Tuneva, 2009].

Trachyzelotes jaxartensis (Kroneberg, 1875) *

Figs 9–12.

Melanophora jaxartensis Kroneberg, 1875: 23, pl. 2, f. 1 (♀);



Figs 9–12. *Trachyzelotes jaxartensis* from Goranboy: 9, 10 — male palp, ventral and retrolateral; 11 — epigynum; 12 — male, general appearance.

Рис. 9–12. *Trachyzelotes jaxartensis* из Гёранбоя: 9, 10 — пальпа самца вентрально и ретролатерально; 11 — эпигина; 12 — внешний вид самца.

Trachyzelotes jaxartensis: Platnick, Murphy, 1984: 10, f. 19–22 (♂♀); Levy, 1998: 107, f. 25–28 (♂♀).

Prosthesima semibadia L. Koch, 1878: 42, pl. 1, f. 3 (♀), **syn.n.**

MATERIAL. 1 ♂, 1 ♀, Goranboy Dist., env. Goranboy Town, 15.05.2015 (EH);

DISTRIBUTION. Natilevy from West Palearctic, from West Mediterranean to Central Asia, introduced worldwide [Platnick, Murphy, 1984].

REMARKS. New record for Gyanja-Gazakh Region. L. Koch [1878] described *Prosthesima semiba-*

dia (= *Zelotes semibadius* (L. Koch, 1878)) on the basis of a single female “von Baku”. Since its original description, there have been no further records concerning the taxonomy and distribution of the species. It is remarkable, however, that Koch described the presence of dense stiff setae on anterior surface of chelicerae of *Z. semibadius*, which is distinguishing character of the recent genus *Trachyzelotes* Lohmander, 1944 [Platnick, Murphy, 1984]. Moreover, he pointed out the similarity of a new species to *Prosthesima barbata*

Table 1. The species and genera diversity of gnaphosid spiders in different regions of Azerbaijan.
Таблица 1. Видовое и родовое разнообразие пауков-гнафозид в различных регионах Азербайджана.

Region	Area km ²	Number of species	Number of genera	Literature
Absheron Peninsula	2110	38	20	Dunin, 1984; Guseinov, 1999
Nakhchivan AR	5500	30	14	Marusik et al., 2005
Sheki-Zagatala Area	8840	28	13	Dunin, 1989; Huseynov et al., 2003
Lenkoran Area	6070	28	17	Guseinov, 1999
Gobusan Region	5550	27	16	Alieyva, 2010; Nuruyeva, Guseinov, 2011
Ganja-Gazakh Region	12300	31	12	Present paper

(= *Trachyzelotes barbatus* (L. Koch, 1866)). Thus, in our opinion, it is without doubt, that *Z. semibadius* belongs to the genus *Trachyzelotes*. Four species of *Trachyzelotes* have been recorded from Absheron Peninsula (where Baku City is located), namely, *T. barbatus* (L. Koch, 1866), *T. jaxartensis* (Kroneberg, 1875), *T. lyonetti* (Audouin, 1826) and *T. malkini* Platnick et Murphy, 1984 [Ovtsharenko, 1982; Dunin, 1984; Guseinov, Rubtsova, 2001]. As it is evident from Koch's own text, *T. barbatus* is certainly a different species. The same is apparently true for *T. malkini* which is closely related to *T. barbatus* and could be easily confused with the later species by genital organs [Kovblyuk, 2004]. Of the remaining species only epigyne of *T. jaxartensis* resembles that of *Z. semibadius* (cf. fig. 27 [Levy, 1998] vs. Taf.1, fig.3 [Koch, 1878]), whereas *T. lyonetti* has very different shape of epigyne (cf. fig. 21 [Levy, 1998], fig. 29 [Chatzaki et al., 2003]). Taking into account the above mentioned we consider *Prothesima semibadia* L. Koch, 1878 (= *Zelotes semibadius* (L. Koch, 1878)), **syn.n.** as a junior synonym of *T. jaxartensis* (Kroneberg, 1875).

Trachyzelotes malkini Platnick et Murphy, 1984*

MATERIAL. 2 ♀♀, Agstafa Dist., Ashagy Kesemen Vil., 14.12.2014 (SKh); 3 ♂♂, 2♀♀, env. of Agstafa Town, 29.04–6.06.2014 (SKh); 1 ♂, Gazakh Dist., Khanliglar Vil., 19.05.2016 (SKh).

DISTRIBUTION. East Mediterranean to Kazakhstan [Platnick, Murhy, 1984; Mikhailov, 2013].

Trachyzelotes pedestris (C.L. Koch, 1837)

MATERIAL. 2 ♀♀, Agstafa Dist., Ashagy Kesemen Vil., 9.04.2014 (SKh); 1 ♀, env. of Agstafa Town, 6.06.2014 (SKh); 1 ♀, Gyoy-gyol Dist., Hajikend Vil., 22.08.2015 (SKh).

DISTRIBUTION. West Palearctic [Levy, 1998; Mikhailov, 2013; Helsdingen, 2014; Zamani et al., 2016].

Urozelotes Mello-Leitao, 1938

Urozelotes rusticus (L. Koch, 1872)*

MATERIAL. 1 ♂, Agstafa Dist., Ashagy Kesemen Vil., 14.12.2014 (SKh).

DISTRIBUTION. Virtually Cosmopolitan species, distributed from Mediterranean to West Siberia and Japan, and also Canada, USA, Hawaii, South America

up to Chile, India, Borneo, Zimbabwe and South Africa [Platnick, Murhy, 1984, Mikhailov, 2013].

Zelotes Gistel, 1848

Zelotes aeneus (Simon, 1878)**

MATERIAL. 1 ♂, Agstafa Dist., Poylu Vil., 19.05.2012 (N.Y. Snegovaya).

DISTRIBUTION. European species [Helsdingen, 2014].

REMARK. Previously this species was recorded from North Caucasus [Mikhailov, Mikhailova, 2002], but recently this record is considered as doubtful [Mikhailov, 2013]. But, we consider our record only as a new for Azerbaijan, not for the whole Caucasus.

Zelotes longipes (L. Koch, 1866)

MATERIAL. 1 ♀, Tovuz Dist., Khatynly Vil., 11.05.2014 (SKh); 7 ♀♀, env. of Agstafa Town, 9.04.2014 (SKh); 2 ♀♀, Gegabey Dist., Novo-ivanovka Vil., 7.10.2015 (EH); 1 ♀, Dashkesan Dist., Khoshbulag Vil., 26.06.2016 (SKh).

DISTRIBUTION. Trans-Palearctic range [Mikhailov, 2013; Helsdingen, 2014].

Zelotes petrensis (C.L. Koch, 1839)

MATERIAL. 4 ♀♀, Gegabey Dist., Novo-saratovka Vil., 6.10.2015 (EH).

DISTRIBUTION. European-Siberian species [Mikhailov, 2013; Helsdingen, 2014].

Zelotes subterraneus (C.L. Koch, 1833)*

MATERIAL. 1 ♂, Agstafa Dist., Poylu Vil., 21.05.2012 (N.Y. Snegovaya); 1 ♀, Gedabey Dist., Novo-ivanovka Vil., 25.07.2015 (EH).

DISTRIBUTION. West-Palearctic range [Kovblyuk, 2006].

Discussion

In result of our investigation 25 species of gnaphosid species belonging to 11 genera were found in Ganja-Gazakh region. Of these 18 species are recorded for the first time for the fauna of the studied area, including one new species for the Azerbaijan and one new record for entire Caucasus. Thereby, together with literature data, at present time, the araneofauna of Ganja-Gazakh region comprises 31 species of gnaphosids

from 12 genera. This is comparable with gnaphosid diversity in other relatively well studied regions of Azerbaijan (Table 1). However, it is obvious that this figure does not reflect the real diversity of Gnaphosidae of this region. It becomes evident if compare it with data from Absheron Peninsula, which is the only actually thoroughly studied area in Azerbaijan in respect to araneofauna. Despite the territory of Absheron is much smaller than areas of other regions, considerably more gnaphosid species were recorded from this area (Table 1).

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