

Результаты

: (.),
 (.),
 « - », (, 2014).
 (2001). 20
 2135 65 4 (-
 Heteroceridae). (963 - , 2016).
 Heteroceridae
 162 /² (Vanin et al., 2016),
 - 110 /² (Mordkovich and
 Lyubechanskii, 2017).
 , 2008; , 2016).
 - 72.0±5.2 /²,
 - 27.5±2.6 /².
 Heteroceridae
 « » (Dyschirius, Dyschiriodes,
 Bledius)
 25×25 (., 2012). 935 /²
 70% 8.5 (Mordkovich
 and Lyubechanskii, 2017).
 Heteroceridae 30
 (. . .). 70% (Kaufmann and Stansly, 1979),
 (Kaufmann, 1987).
 Heteroceridae,
 -9
 XSP-101.
 , 1000 Heteroceridae
 Laelapidae, Heteroceridae

Bembidion (Holeski, 1984)
Staphylinidae.

Carabidae

Heteroceridae –
(, 1984).

Heterocerus Augyles

Lyubechanskii, 2017),

(Mordkovich and

(Bernhardt, 1995), ,

(Sazhnev, 2018).

Питание *Heteroceridae*

Heteroceridae

Augyles auromicans (Kiesenwetter, 1851)

(Gwynn-Silvey, 1935). (Green, 1968)

Heterocerus
(Pacheco, 1964)

(Pacheco, 1978)

Heteroceridae

Neoheterocerus pallidus (Say, 1823)

and Stansly, 1979).

(Lawrence, 1991),

Heteroceridae –
()-

(Begon et al., 1986).

Трофические сети в сообществах с участием *Heteroceridae*

(, 1981),

Heterocerus freudei (Pacheco, 1973)

(, 1999).

(*Navicula capitata*,
Navicula spp., *Caloneis brevis*, *Mastogloia exigua*
) (Vanin et al., 1995).

(, 1971).

Heteroceridae

(, 1951)

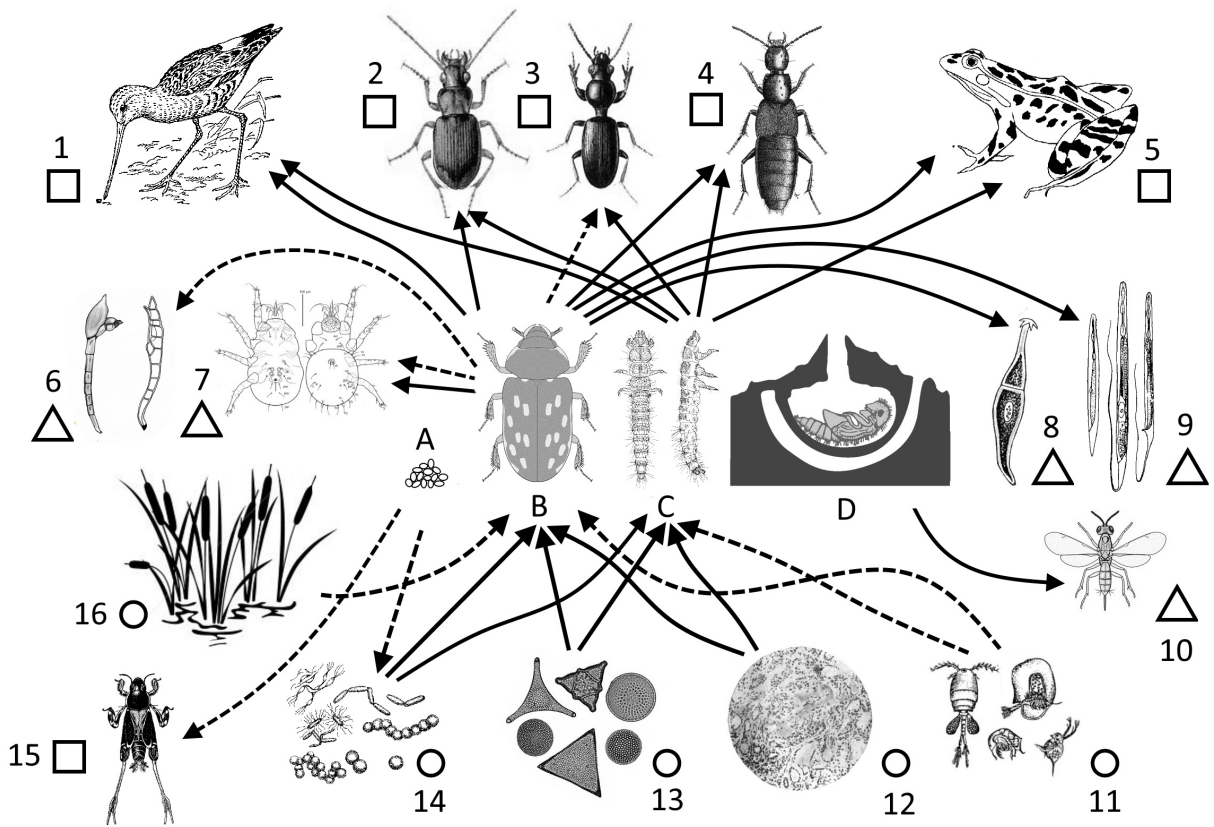
(, 1946).

Dyschiriini Clivinini,
Bledius.

– *Bembidion*, *Bledius*,
Cercyon, *Dyschirius*, *Elaphrus*, *Georissus*,
Philonthus, *Stenus* (Sazhnev and Prokin, 2017).
Heteroceridae
(, 2014; Howden, 1977; Schreiner,
Dyschirius *Dyschiriodes* – Ozorio, 2003):
Saldidae,
Bledius Heteroceridae. *Bledius* Diptera, Tridactylidae,
Heteroceridae
Bledius (*Pucerus*) *verres* Erichson, 1840. (Folkerts, 1989).
(Deville, 1924)
Heteroceridae
Carabidae
Staphylinidae – (Crowson, 1981).
Dyschirius, *Dyschiriodes*
Lesteva. Heteroceridae
Paederus, *Stenus*,
Bembidion, *Philonthus*, *Xantholinus*, *Lathrobium*
()
(Gwynn-Silvey, 1935). – *Pelophylax ridibundus* (Pallas, 1771),
Passeridae, Motacillidae, Muscicapidae
Agonum, *Badister*, *Cicindela*, *Chlaenius*, *Elaphrus*, Scolopacidae,
Pterostichus (Schmidt et al., 2004; Turner, 1959).
Heteroceridae
195 20

Симбионты Heteroceridae

Acupalpus, *Bembidion*, *Badister*, *Stenus*,
Philonthus, *Lathrobium*,
Aleocharinae
Carpelimus,
Hydrophilidae.
(7 14)
Heterocerus
fenestratus (Thunberg, 1784),
Carabidae
Hydrophilidae. Heteroceridae
“ ”
Dyschirius, *Bledius*
Stenus. 12 : 4 – Nematoda, 5 –
Omophron limbatum (Fabricius, 1777) – Acari, 1 – Gregarinida, 1 – Chalcidoidea 1 –
Georissidae. – Ascomycota (Sazhnev, 2018).
(Hirschmann, 1952;
Dyschirius thoracicus (P. Rossi, 1790) *Augyles* Wachek, 1955).
hispidulus (Kiesenwetter, 1843), *Heterocerus* “ ”
Spiruria,
c , *Goffartia heteroceri* Hirschmann, 1952
Heteroceridae – *Goffartia variabilis* (Micoletzky, 1922).



1. Heteroceridae (- ; -)
 Heteroceridae. Heteroceridae: A - , B - , C - , D -
 1 - Scolopacidae , 2 - Carabidae
 3 - *Dyschirius Dyschiriodes*, 4 - Staphylinidae, 5 - , 6 - Laboulbeniales, 7 -
 8 - Gregarinida, 9 - , 10 - Chalcidoidea, 11 - , 12 - , 13 -
 14 - , 15 - Tridactylidae, 16 -

(. Diplogastridae) . Histiostomatidae. -
Pristionchus Iheritier (Maupas, 1919) - (Wirth, 2004),
Protylechus heteroceri Wachek, 1955 (Crowson, 1981; Wachek, 1955).

Allopygmephorus matthesi (Krczal, 1959), *A. persicus* Khaustov et Hajiqanbar, 2005 (Katlav et al., 2015; Khaustov and Hajiqanbar, 2006), *A. spinisetus* Khaustov et Sazhnev, 2016 *A. punctatus* Khaustov et Sazhnev, 2016 (Khaustov and Sazhnev, 2016),
Scutacarus sphaeroideus Karafiat, 1959 (Khaustov and Sazhnev, 2016).
 Heteroceridae Gregarinida -
Gregarina heteroceri Rauchalles, 1969 (Geus, 1969).

Chalcidoidea, -
Heterocerus fenestratus (Mascagni, 2015).

Laboulbeniales, -
 Heteroceridae -
 Laelapidae -
Botryandromyces heteroceri (Maire).

Gaeolaelaps heteroceri Trach, 2016
G. sevastianovi Trach, 2016 (Trach, 2016). " " (, 1974)
Histiostoma maritimum (Oudemans, 1914)

Выводы

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Entomological Research **1**, 157–170. . *Tethys*
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(. 1). , . . ., 1971. -
(- **3**, 19–25. -
Augyles, *Omophron*, *Bledius*), , . . ., 2017. -
(*Heterocerus*, *Bledius*, :
Dyschirius). - **1** (3), 146–188. -
, . . ., 2001. -
(2001). (Insecta: Diptera) -
- - -
, *Bledius*, *Carpelimus*, 25 . -
Tridactylidae. , . . ., 2008. -
Dyschirius *Dyschiriodes*, , *Clivina*, (Coleoptera) -
Heteroceridae. : -
, « . . . » . -
, 38–53. , , -
Heteroceridae, , . . ., 2014. -
(Coleoptera) « - » -
Благодарности -
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Heteroceridae (Coleoptera) -
Список литературы -
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(Coleoptera, (Coleoptera, Carabidae). , ,
Heteroceridae). 360 . -
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On the position of Heteroceridae (Insecta: Coleoptera) in food webs in riparian communities

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The position of the beetle family Heteroceridae in food webs of riparian communities in European Russia and Mongolia is discussed, and the main trophic links within the Heteroceridae-related communities are recorded. The feeding spectrum of heterocerids, and the main predators of preadult and adult Heteroceridae, are identified and reported. Symbionts of heterocerids are also discussed.

Keywords: trophic web, heterocerids, ecotone, beetles, supralittoral, associate organisms, feeding.