

SELECTED BIBLIOGRAPHY

from "Trichoptera Newsletter" N 10-15

Vladimir D.Ivanov

1976

Леванидова И.М. Ephemeroptera и Trichoptera Чукотского полуострова.- Тр. Биолого-почв. ин-та, Владивосток, 36: 38-56.

Levanidova I.M. Ephemeroptera and Trichoptera of Chukotka peninsula. - Proc. Biol. Inst., Vladivostok, 36 (139):38-56.

There are 12 species of Ephemeroptera and 19 species of Trichoptera in the region studied. The family Limnephilidae is most abundant among caddisflies. Larva of Imania sichotalinensis (?) Mart. is described. Apataniana tschuktschorum Lev. and Imania sichotalinensis (?) Mart. live near hot springs. Most species of this region are widespread.

1981

Давыдова Э.Д. Состав групп нейросекреторных клеток медиального протоцеребрума ручейников (Trichoptera, Insecta). - Докл. АН СССР, 260, 3 : 750-752.

Davydova E.D. The composition of the neurosecretory cell groups in the medial protocerebrum of Trichoptera (Insecta). - Rep.Acad.Sci.USSR, 260 (3): 750-752.

Medial parts of the protocerebrum of Hydatophylax magnus (Mart.), Potamophylax stellatus Curt., Odontocerum albicorne Sc., Goera sp., Molanna sp., Hydropsyche sp., Stenopsyche marmorata Nav. have 3 medial neurosecretory cell groups. Different cell types are detected by differential staining. In higher Integripalpia and in Lepidoptera a number of these cells is constant. Caddisflies are unic in having only one cell designated as A1 (1st medial group).

Малицки Г. О географической изменчивости ручейника Hydropsyche contubernalis McL. (Trichoptera, Hydropsychidae) как возможного объекта генетических исследований процесса дифференциации на подвидовом уровне. - Энтомол. обозр., 60 (4): 865-869.

Malicky H. On geographical variability in Hydropsyche contubernalis McL. (Trichoptera, Hydropsychidae) as possible object of genetic study of differentiation process at subspecies

level. - Entomol. Rev. (USSR), 60 (4): 865 - 869.
 Data on aedeagus variability of H. contubernalis McL. are summarized using the author's samples and collections of Zoological Institute (Leningrad). Four morphological types are established and data on their distribution are given. This species could serve as good object for microevolutionary studies. A problem of phenology is discussed for this species.

1982

Spuris Z. Makstenų sastopamiba ābelu vainagos. Latv. Entomol., 25 : 59 - 62.

Spuris Z. Appearance of caddisflies in the crowns of apple trees. - Latv. Entomol., 25: 59-62.

9 species of caddisflies were found in vicinities of Elgava. Adults of some species (e.g. Limnephilus flavicornis F.) are univoltine; they spend hot summer days in tree crowns, and reproduction begins in autumn.

Леванидова И.М. Амфибиотические насекомые горных областей

Дальнего Востока СССР. Фаунистика, экология, зоогеография Ephemeroptera, Plecoptera и Trichoptera. - Л., Наука, 215 с.

Levanidova I.M. Amphibiotic insects of mountain regions of Far East of USSR. Fauna, ecology, zoogeography of Ephemeroptera, Plecoptera, and Trichoptera. - Leningrad, Nauka, 215 pp.

Monograph on lotic fauna with special reference to that of fast streams. Ecology of abundant species, life cycles, larval drift, and zoogeography are discussed. The fauna of Soviet Far East is similar to that of West North America.

Сукачева И.Д. Историческое развитие отряда ручейников. М., Наука, 112с.

Sukatshева I.D. Historical development of the order Trichoptera. М., Nauka, 112 pp.

Phylogeny and geological history of caddisflies based on modern palaeontological data are described. Keys for fossil caddisflies are given. Main part of the monograph is consisted of the review of palaeontological localities and new fossil taxa descriptions. First tube-like cases appeared in the end of Jurassic; evolution of cases was accelerated during Low Cretaceous, pre-cretaceous caddisflies were sharply unlike comparing to extant ones.

1983

- Бродский А.К., Иванов В.Д. Функциональная оценка строения крыльев насекомых. - Энтомолог. обозр., 62: 48-64.
- Brodsky A.K., Ivanov V.D. Functional assesment of wing structure in insects.- Entomol.Rev. (USSR), 62: 48-64.
- English translation: Ent.Rev. (Washington), 1983, 1: 35-52.
- Interactions of structure and functions of insect wings are discussed, functional patterns of wings are given for Oligotricha striata L. and Phryganea bipunctata Retz.
- Козлов А.Т. Система жизненных форм личинок ручейников.- Докл. АН СССР, 271: 762-765.
- Kozlov A.T. Life forms system for caddis larvae.- Rep.Acad. Sci.USSR, 271: 762-765.
- A diversity of ecology, behaviour, and morphology is discussed for immatures of caddisflies.
- Кумански К.П. Принос към изучаването на ручейниците (Trichoptera) в България.V. - Acta Zool. Bulg., 21: 83-88.
- Kumansky K.P. A contribution to the studies on Bulgarian caddisflies (Trichoptera).V. - Acta Zool. Bulg.,21:83-88.
- New faunistic data on 32 species are reported; 2 species are new for Bulgaria. Hydropsyche dentata Kum. = H. saxonica McL. (new synonymy). The presence of Leptocerus tineiformes Curt. in the country is confirmed.
- Спурис З. Первый всесоюзный трихоптерологический симпозиум.- Изв. АН Латвийской ССР, 1983 (10): 131-132.
- Spuris Z. The 1st allunion symposium on trichopterology. - Proc.Acad.Sci.Latvian SSR, 1983 (10): 131-132.
- A review of the results.

1984

- Козлов А.Т. Изменение строительного поведения личинок ручейников Molanna angustata в процессе индивидуального развития.- Зоол. журн., 63 (I): 69-73.
- Kozlov A.T. Change of the construction behaviour of Molanna angustata larvae during ontogenesis. - Zool.Journal(USSR), 63 (1): 69-73.
- New-born larvae of M.angustata construct rapidly a provisional case. This case is tube-like; it is made of detrit particles. Older larvae build a "winged" case of sand;

assortment and testing of grains appears in behaviour after 4-6 days of development. "Wings" are added at 6-10th day.

Behavioural patterns of larvae are described.

Козлов А.Т. Жизненные формы личинок ручейников Воронежской области и их важнейшие этологические характеристики. В сб.: Ориентация насекомых и клещей. Томск, Изд-во Томского ун-та. 178 с.: 148-151.

Kozlov A.T. Life forms of caddisflies larvae in Voronezh district and their main ethological characteristics. In: Orientation of insects and mites. Tomsk, Tomsk Univ. Publ., 178 pp.:148-151.

Abstract. Life form is a set of organisms using common ecological niche and possessing a number of similar morphological characters evolved by common factors of the natural selection. Follows ecological types and groups of caddisflies are described: rheophils (lithorheobionts+euribionts) and limnophils (litholimnionts etc.). A classification of ecological and behavioural types of local fauna is given.

Резолюция первого всесоюзного трихoptерологического симпозиума. - Latv. Entomol., 27: 89-90.

Resolution of the 1st allunion symposium on trichopterology. - Latv. Entomol., 27: 89-90.

Achievements and problems of the trichopterology in USSR are summarised.

1985

Спурис З.Д. Первый всесоюзный трихoptерологический симпозиум. - Latv. Entomol., 28: 58-62.

Spuris Z.D. The 1st allunion symposium on trichopterology. - Latv. Entomol., 28: 58-62.

Review of the 1st Soviet trichopterological symposium took place in Riga in August 22-24, 1983, includes short abstracts of reports with special attention to faunistic exploration of different parts of the USSR. The numbers of registered species are for Far East - 207, Baikal region - 142, Caucasus - 160 (North Caucasus - 66), Baltic region - 200 (Latvian SSR - 190). Total amount is 650 species, larvae are known for 219 ones. There are more than 80 localities of fossil caddis fauna.

1985 (contd.)

Борисова Н.В. Ручейники Алтайского заповедника. - Latv.

Entomol., 28: 76-84.

Borisova N.V. Caddisflies of the Altai nature reserve. -

Latv. Entomol., 28: 76-84.

Altai reserve is situated in the very centre of Asia; 41 species of caddisflies have been recorded there. Most of them lives in mountain rivers. The majority (28) of listed species are members of Limnephilidae.

Емелина С.В. Ручейники дельты Волги. - Latv. Entomol., 28: 63-75.

Emelina S.V. The caddisflies of the Volgian delta. - Latv.

Entomol., 28: 63-75.

52 species of caddisflies have been listed for the delta of the river Volga. Most of them are Leptoceridae (16 spp.) and Hydroptilidae (11 spp.). Zoogeography is discussed.

Иванов В.Д. Структура и функции крылового аппарата ручейников.

Автореф. дисс. на соискание учен. степени к.б.н. Ленинград, 21с.

Ivanov V.D. Structure and functions of wing mechanism of caddis-

flies. Abstract of Ph.D. Thesis. Leningrad, 21p.

Flight behaviour, morphology of wings and wing articulations, wing movements in flight, wing-air interactions are discussed.

Иванов В.Д. Строение и эволюция крылового сочленения ручейников. I.

Исходный тип строения. - Вестн. Ленингр. ун-та, Биол., 2: 3-12.

Ivanov V.D. Structure and evolution of wing articulation of

caddisflies. I. Ground plan. - Bull. Leningrad Univ., Biol., 1985 (2): 3-12.

Wing bases of the archaic caddisflies were investigated with particular attention to the primitive species Rhyacophila nubila Zett. The homologization of wing veins behind Cu stem was examined and altered: 1A in fore and CuP in hind wings are independent postcubital (PCu) stem, CuP of hind wings are reduced. Wing narrowing gives rise to the reduction of anal veins. The evolution of hind part of wing articulations appears to be faster than that of other parts. Wing hinge morphology is independent of alar sexual dimorphism and is constant on the species level. Wing bases of palaeozoic caddisflies are discussed.

Иванов В.Д. Сравнительный анализ кинематики крыльев ручейников (Trichoptera). - Энтомол. обзор., 64 (2): 273-284.

Ivanov V.D. A comparative analysis of wing kinematics in caddis-

1985 (contd.)

flies (Trichoptera). - Entomol. Rev. (USSR), 64 (2): 273-284. Flight of 30 species (11 families) was studied by means of high-speed filming in the wind tunnel. Different types of wing kinematics were established. Fore and hind wings of the archaic caddisflies (e.g. Rhyacophilidae) are not interlocked in flight, hind wings lag behind fore ones during rising phase. Wing coupling mechanisms appear independently in different lines of evolution of caddisflies. Four types of wing deformation during the supination were established: deformational wave, wing tip flexion, enormous torsion of the wing, and the combination of the two last processes. The 1st type is the most advanced. Wingbeat frequency increases in the course of evolution.

Иванов В.Д. Поведение ручейников в полете. - Latv.Entomol., 28:85-94.

Ivanov V.D. Behaviour of caddisflies in flight.-Latv.Entomol., 28: 85-94.

The speed of forward flight is always less than 2.5 m/s, preferable altitudes are low, hovering is absent; the manoeuvrability is better in small caddisflies. Some of Hydropsyche females can cover more than 60 km in flight. Migratory flight is described for Arctopsyche ladogensis Kol. and Ceraclea nigronervosa Retz. The swarming patterns of Polycentropodidae, Arctopsychidae, Molannidae, Hydropsychidae and Leptoceridae are described. Evolution of swarming is discussed. The types of swarming in Trichoptera and Ephemeroptera are similar.

Сукачева И.Д. Юрские ручейники Южной Сибири. - В кн.: Юрские насекомые Сибири и Монголии. М., Наука, 192 с.: II5-II9.

Sukatsheva I.D. Jurassic caddisflies of the South Siberia.- In: Jurassic insects of Siberia and Mongolia. M., Nauka, 192p.: 115-119. Descriptions of new genera and species of caddisflies, mainly Annulipalpia=Hydropsychina (Rhyacophilidae, Philopotamidae, Necrotauliidae), and a remnant of hydroptilid case.

1986

Власова В.Г. Фауна ручейников Ленинградской области. - Latv. Entomol., 29: 85-107.

Vlasova V.G. Fauna of caddisflies of the Leningrad region.- Latv.Entomol., 29: 85-107.

Totally 163 species are registered for the western part of

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Leningrad region; the eastern part of this district is unexplored. Integripalpia is a prevalent group (115 spp.), Limnephilidae includes 60 spp. (Limnephilus - 30).

Бродский А.К., Иванов В.Д. Работа аксиллярного аппарата ручейника. - Вестн. зоологии, 1986 (4): 68-74.

Brodsky A.K., Ivanov V.D. Action of the wing articulation in a caddisfly.- Vestn. zool., 1986 (4): 68-74.

A high-speed cine film was made in order to visualize the fore wing hinge action in Semblis atrata Gmel. There are 3 hinges of the wing base (horizontal, vertical, torsional) providing up-and-down, forward-backward and supinative movements, respectively. The muscle of pterale 3 is a phasic remotor during upstroke. Backward shifting of the wing is performed by the mechanism formerly supposed to fold the wing at rest.

Вшивкова Т.С. Ручейники семейства Glossosomatidae Wall. (Trichoptera) Дальнего Востока СССР. I. Подсемейство Glossosomatinae Wall. - В сб.: Донные организмы пресных вод Дальнего Востока СССР. Владивосток: 58-75.

Vshivkova T.S. Caddisflies family Glossosomatidae Wall. (Trichoptera) of the Far East of USSR. I. Subfamily Glossosomatinae Wall. - In: Benthic freshwater insects of the Far East of the USSR. Vladivostok: 58-75.

This subfamily is represented in the region studied by a single genus Glossosoma Curt. with 2 subgenera: Anagapetus Ross (1 sp.) and Synafophora (Mart.) (6 spp.). Diagnoses are improved, data on distribution and keys are given.

Козлов А.Т. О градации жизненных форм личинок ручейников. - Докл. АН СССР, 290 (4): 1020-1024.

Kozlov A.T. On the gradation of life forms of caddis larvae. - Rep. Acad.Sci.USSR, 290 (4): 1020-1024.

A detailed system of life forms is produced for caddisflies' larvae inhabiting lentic waters. Limnephilidae is the most diverse family.

Кочарина С.Л. К биологии трех видов сетеплетущих ручейников в реке Кедровая (Южное Приморье). - В сб.: Донные организмы пресных вод Дальнего Востока СССР. Владивосток: 76-87.

Kocharina S.L. On the biology of 3 species of net-spinning caddisflies in the river Kedrovaya (South Primor'e). - In:

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Benthic freshwater insects of the Far East of USSR.

Vladivostok: 76-87.

Life cycles of Stenopsyche marmorata Nav., Arctopsyche palpata Mart. and Hydropsyche orientalis Mart. were studied, ecological data on biomass dynamics and population density are given.

Кочарина С.Л. Биология трех видов хищных ручейников Приморского края. - Latv. Entomol., 29: 134-143.

Kocharina S.L. The biology of three predaceous caddisflies of Primorsky Krai. - Latv. Entomol., 29: 134-143.

The biology of Apsilochorema sutschanum Mart., Rhyacophila narvae Nav. and Rhyacophila impar Mart. in the river Kedrovaya (Far East of the USSR) is investigated with special attention to larvae.

Корноужова И.И. Фауна ручейников Кавказа. - Latv. Entomol., 29: 60-84.

Kornoukhova I.I. The fauna of caddisflies of the Caucasus.- Latv. Entomol., 29: 60-84.

A review of Caucasian fauna is given. Totally 158 spp. are included in the list. The zoogeographical composition of the fauna is follows: 48 spp. are endemic, 37 - subendemic, 29 - European, 31 - palaeartic, 6 - holarctic, 6 - Middleasiatic.

Меншуткина Т.В. Фауна и фенология лёта ручейников озера Байкал. - Latv. Entomol., 29: 108-133.

Menshutkina T.V. Fauna and flight periods of caddisflies of the Baikal lake. - Latv. Entomol., 29: 108-133.

The fauna of caddisflies of Baikal contains 15 endemic species belonging to the tribes Apataniini and Baicalinini. Distribution and flight periods of 11 species are described; Baicalinella foliata Mart., Baicalina bellicosa Mart., Thamastes dipterus Hag. are the most common ones.

Спурис З.Д. Происхождение фауны ручейников Прибалтики. - Latv. Entomol., 29: 45-59.

Spuris Z.D. Origin of the East Baltic fauna of caddisflies. - Latv. Entomol., 29: 45-59.

Extant fauna of caddisflies of the East Baltics appeared in Holocene during the postglacial period. There are two

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species complexes: the 1st is of northern origin, includes mainly stagnant water species, especially limnephilids, appeared in the end of the Tertiary (Neogen) and returned from refuges situated at the North-East, East, and South-West after glaciation. The second complex comprises species of South-West origin, mainly that of running water.

1987

Григоренко В.Н. Состав фауны ручейников Крыма. -

Latv. Entomol., 30: 76-89.

Grigorenko V.N. The composition of caddisfly fauna of Crimea. - Latv. Entomol., 30: 76-89.

The annotated list of caddisflies of Crimean peninsula comprises 50 species; 44 ones are listed for mountains, 14 for plain regions of the steppe. Reasons for the relative scantyness of Crimean trichopteroфаuna are discussed.

Иванов В.Д. Строение и эволюция крылового сочленения ручейников. 2. Сочленения крыльев целнощупиковых. - Вестн. Ленингр. ун-та, сер. 3, I (3): II-2I.

Ivanov V.D. Structure and evolution of wing articulation of caddisflies. 2. Wing articulations of Integripalpia. - Bull. Leningrad Univ., ser. 3, 1 (3): 11-21.

Wing base morphology was studied for 11 families of caddisflies. Wing articulations of Integripalpia initially were similar to the type of Glossosomatidae. Family Phryganeidae is primitive and connected with extinct Baissoferidae. Wing bases of goerids are similar to those of Lepidostomatidae, Brachycentridae, Sericostomatidae, and Beraeidae. Articulations of Calamoceratidae are specialized on the primitive basis and differs from that of Leptoceridae. The last family, Odontoceridae, and Molannidae are similar to Sericostomatidae and Brachycentridae. The structure of the wings does not influence wing articulations. The fore wing bases are more conservative than hind ones. Wing hinge structure is stable in each separate family, but in older ones a degree of variation occurs.

1987 (contd.)

Иванов В.Д. Строение и эволюция крылового сочленения ручейников. 3. Сочленения крыльев кольчатощупиковых. - Вестн. Ленингр. ун-та, сер. 3, 3 (17): 15-25.

Ivanov V.D. Structure and evolution of wing articulation of caddisflies. 3. Wing articulations of Annulipalpia. - Bull. Leningrad Univ., ser. 3, 3 (17): 15 - 25.

Wing base morphology of annulipalpiian caddisflies was studied and the analysis of its evolution was made. Family Philopotamidae has the most primitive wing bases in this suborder, this family is related to Psychomyiidae and Polycentropodidae. Fam. Stenopsychidae differs sharply from philopotamids in many features. Hydropsychids are heterognous: Macronematinae is similar to Dipseudopsidae and Stenopsychidae, while Hydropsychinae - to Arctopsychidae and, partly, to Stenopsychidae. The structure of wing articulations is specific on family level. More loaded elements of wing hinge have low rate of evolution. Main changes in wing articulations are discussed.

Иванов В.Д., Козлов М.В. Сравнительный анализ мускулатуры птероторакса ручейников (Insecta, Trichoptera). - Зоол. журн., 66 (10): 1484-1498.

Ivanov V.D., Kozlov M.V. Comparative analysis of pterothoracic musculature of caddisflies (Insecta, Trichoptera). - Zool. Journ. (USSR), 66 (10): 1484-1498.

The musculature of meso- and metathorax of 17 species from 13 families is investigated, basic trends in its evolution are discussed. Sternotrochanteral, 3 coxotrochanteral, and 3 coxal muscles are added to the list. Caddisflies have muscle t-s 12 instead of t-p 5. Muscle previously designated as t-p 10 appears to be anterior part of t-p 12. Subalare is of pleural origin, its muscles are designated as p6 and p-cx 10. Muscles t-p 15, p 2, p-s 6 and s-cx 3 are lacking in caddisflies. Evolution of the musculature is confined mainly to the reduction of some small muscles and is in poor correspondence to the phylogeny of the order. The structure of pterothoracic musculature of Trichoptera and Lepidoptera is similar and does not depend on wing kinematics and flight behaviour. The muscles connected with legs are the most variable.

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Качалова О.Л. Второй всесоюзный трихoptерологический симпозиум.-

Latv. Entomol., 30: 90-92.

Kachalova O.L. Second allunion trichopterological symposium.-

Latv. Entomol., 30: 90-92.

Short review of the Second symposium is presented including a list of 22 participants. The symposium took place in the Ordzhonikidze city (North Caucasus). Ecology of caddisflies was the main subject of this symposium. The resolution is enclosed.

Качалова О.Л. Ручейники. В кн.: Медведев Г.С. (ред.). Определитель насекомых европейской части СССР, т.4. Л., Наука: 107-200.

Kachalova O.L. Caddisflies. In: Keys for determination of insects of European part of USSR. Medvedev G.S. (ed.). Vol.4. Leningrad, Nauka: 107-200.

Modern keys for adults, well illustrated and furnished with short description of morphology and biology, are a part of book including keys for Megaloptera, Mecoptera, and Neuroptera as well.

Козлов А.Т. Индивидуальное и историческое развитие этоморф личинок ручейников. - Докл. АН СССР, 297 (2): 509-512.

Kozlov A.T. Individual and historical development of the ethomorphs of caddis larvae. - Rep. Acad. Sci. USSR, 297 (2): 509-512.

Ecological types of caddisflies are described and classified. Larval behavioural patterns are discussed in the historical aspect.

Additions

1981

Иванов В.Д. Складывание крыльев живых насекомых. - Вестник Ленингр. ун-та, 1981 (15): 101-103.

Ivanov V.D. Wing folding in living insects. - Bull. Leningrad Univ., 1981 (15): 101-103.

An investigation of wing folding of the stonefly Nemoura cinerea Ol., alder-fly Sialis morio Klst., and caddisfly Oligotricha striata L. was made using photoflash. Folding wings are raised up in a supinated state, then sink down on the abdomen, and the pronation begins. Finally the wings lie down by means of horizontal movements.

1986

Козлов М.В., Иванов В.Д., Гродницкий Д.Л. Эволюция крылового аппарата и кинематика крыльев чешуекрылых.- Успехи совр. биол., 101 (2):291-305.

Kozlov M.V., Ivanov V.D., Grodnitsky D.L. Wing mechanism evolution and wing kinematic of Lepidoptera. - Adv. Modern Biol., 101 (2): 291-305.

Primitive representatives of both Lepidoptera and Trichoptera have four-winged flight, wings move independently. Wing locking mechanisms evolved several times in these orders affecting the wing kinematics. Wing locking devices are more diverse in caddisflies than in moths. Flight of Neuroptera and Mecoptera is similar to primitive amphiesmenopteran type. Deformation types and behavioural patterns are more diverse in caddisflies than in moths.

1988

Иванов В.Д. Строение палеозойских ручейников семейства Microptysmatidae (Insecta). - Палеонт.ж., 1988 (3): 64-69.

Ivanov V.D. Structure of Palaeozoic caddisflies family Microptysmatidae (Insecta).- Palaeontol. Journ., 1988 (3): 64-69.

Redescription of Kamopanorpa rotundipennis Martynov, 1934 was made using new characters appeared after cleaning of the remnants. Other well preserved fossils of the same family and, probably, the same species from North Russia were described including fine structures of the head, thorax, legs, male and female terminalia. Microptysmatidae are true Trichoptera. Relations of Microptysmatidae, Lepidoptera and Mecoptera are discussed.

Козлов А.Т., Цецура В.Н. Поведение личинок ручейников Limnephilus sp. в условиях резкого изменения веса строительного материала.- Косм.биол. и аэрокосм.мед., 22 5 : 88-90.

Kozlov A.T., Tsetsura V.N. Behaviour of Limnephilus sp. larvae in the circumstances of sharp changes of weight of construction substance.-Space Biol. and Aerosp. Med., 22 (5): 88-90.

Small spheres made of penoplast were used as a material for case construction. The plastic substance used for this experiment is lighter than water. Behavioural pattern appears to be similar to that of normal conditions, but

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some stages are different indicating the lability of the behaviour.

Данко Н.Н. Фауна ручейников Украинских Карпат и Прикарпатья. - Latv. Entomol., 31: 69-77.

Danko N.N. Fauna of caddisflies of the Ukrainian Carpathians and Pricarpatie. - Latv. Entomol., 31: 69-77.

A historical review of faunistic investigations of caddisflies in the Ukrainian Carpathians and Pricarpatie (Carpathian piedmonts) is given. There are registered 190 species according to literature data, 11 of them are endemic.

1988

Козлов А.Т., Цецура В.Н. Поведение личинок ручейников

Limnephilus sp. в условиях резкого изменения веса строительного материала. - Космич. биол. и авиакосмич. мед., 22,5: 88-9

Kozlov A.T., Tsetsura V.N. Larval behaviour of Limnephilus sp. in the conditions of sharp weight changing of the material for case construction. - Space Biol. Aerospace Med. (USSR), 22, 5: 88-90.

Case-making behaviour of larvae using foam plastic spheres for case construction was studied in the laboratory experiments. Plastic spheres floated on the water surface, thus the condition of weightlessness was imitated. To take the particles from water surface, the larva should turn upside-down, then take a particle by fore legs; this particle is attached after checking to the abdomen to make the initial ring around it. During these manipulations larvae floated in the thick layer of water. Larvae did not make provisional cases. Lability of behaviour and the learning processes were illustrated.

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1979

Леванидов В.Я., Вшивкова Т.С., Кочарина С.Л. Биомасса и структура донных биоценозов лесных ручьев в верховьях бассейна Уссури. - В сб.: систематика и экология рыб континентальных водоемов Дальнего Востока (Владивосток) : 27 - 35

Levanidov V.Ya., Vshivkova T.S., Kocharina S.L. Biomass and structure of benthic biocenoses of forest brooks in upper waters of Ussuri basin. - In: Systematics and ecology of fishes of continental water bodies of the Far East (USSR). Vladivostok: 27-35.

1981

Кочарина С.Л. Биомасса и структура донного сообщества ручья Олень бассейна Верхней Колымы. - В сб.: Беспозвоночные животные в экосистемах лососевых рек Дальнего Востока.. Владивосток: 51-58.

Kocharina S.L. Biomass and structure of benthic communities of Olen' brook in Upper Kolyma basin. - In: Invertebrate animals in salmon river ecosystems of the Far East (USSR).

Vladivostok: 51-58.

There are 3 species of caddisflies living in the small cold (4.9°C) brook with stony bottom: Apatania tschuktschorum Levan., Architremma ulachensis Mart., Rhyacophila sp.

(sibirica group); the last two species are the most abundant.

Specimen density of caddisflies is ca. 27 m⁻¹. The fauna of Kolyma basin in this place differs from that of Chukotka peninsula.

Рожкова Н.А. Ручейники рек Прибайкалья.-Иркутск, 36 с.

Деп. в ВИНТИ 02.02.1982, № 485.

Rozhkova N.A. Caddisflies of the rivers of Pribaikal'e. - Irkutsk, 36 p. Dep. in VINITI 02.02.1982, no. 485.

The fauna of caddisflies in rivers near lake Baikal is explored. The manuscript is deposited in All-Union Institute of Scientific and Technical Information, Moscow, 125219, A-219, Baltijskaya st., 14, VINITI, Dept. of Biology; for copies, 140010, Moskow distr., Lubertsy 10, October Ave., 403, POK VINITI.

1982

Ручейники (Trichoptera) рек Прибайкалья и прилежащих территорий.

Автореферат диссертации к.б.н. Иркутск. 21 с.

Rozhkova N.A. Caddisflies (Trichoptera) of Pribaikal'e rivers and adjacent territories. - Abstract of the Ph.D. Thesis. Irkutsk, 21 p.

1986

Кочарина С.Л. К биологии трех видов сетеплетущих ручейников в реке Кедровая (Южное Приморье). - В сб.: Донные организмы пресных вод Дальнего Востока. Владивосток: 76-87.

Kocharina S.L. To the biology of 3 species of net-spinning caddisflies in Kedrovaya river (South Primor'e). - In: Benthic organisms of fresh waters of the Far East (USSR). Vladivostok: 76-87.

Life cycles of Stenopsyche marmorata Nav., Arctopsyche palpata Mart., Hydropsyche orientalis Mart. are investigated. All these species are univoltine and have 5 larval instars. They emerge in late summer and autumn, and are the most abundant caddisflies in the river Kedrovaya. Average biomass are 11,6 g/m², 1,7 g/m², and 0,4 g/m² respectively.

1987

Кочарина С.Л. Энергетический обмен личинок трех видов реофильных ручейников в р. Кедровая (Южное Приморье). - В сб.: Донные беспозвоночные рек Дальнего Востока и Восточной Сибири. Владивосток: 19-25.

Kocharina S.L. Larval energy exchange of 3 species of rheophilous caddisflies in Kedrovaya river (South Primor'e). - In: Benthic invertebrates of the Far East and East Siberian rivers. Vladivostok: 19-25.

The data contain the estimations of oxygen consumption, relation of O₂-consumption speed to the body weight, and energy exchange in larvae of Stenopsyche marmorata Nav., Arctopsyche palpata Mart., Hydropsyche orientalis Mart. in the river Kedrovaya. Sluggish larvae of S.marmorata Nav. have the least rate of O₂-consumption and the largest specific energy of body stuff.

1987 (contd.)

Потиха Е.В. Зообентос р. Заболоченная Сихотэ-Алинского биосферного заповедника (Приморье). - В сб.: Донные беспозвоночные рек Дальнего Востока и Восточной Сибири. Владивосток: 40-41.

Potikha E.V. Zoobentos of river Zabolochennaya in Sikhote-Alin Biosphere Reserve (Primor'e). - In: Bentic invertebrates of the Far East and East Siberian rivers. Vladivostok: 40-41. There are 24 species of caddisflies discovered among other aquatic insects in the small rapid river on the east mountainside of Sikhote-Alin mountains. A list of species is enclosed.

Самохвалов В.Л. Распределение зообентоса на плесах и перекатах в некоторых предгорных притоках р. Колыма. - В сб.: Донные беспозвоночные рек Дальнего Востока и Восточной Сибири. Владивосток: 44-49.

Samokhvalov V.L. Zoobentos distribution on reaches and shoals in some piedmont tributes of Kolyma river.-In: Bentic invertebrates of the Far East and East Siberian rivers. Vladivostok: 44-49.

The aim of this work was to make faunistic comparison of two neighbouring parts of the flow with fast and slow currents. In the North Siberian rivers studied 4 species of caddisflies were found: Dicosmoecus palatus McL. (abundant in the slower parts of current), Rhyacophila sp. (sibirica group), Hydatophylax nigrovittatus McL., Architremma ulachensis Mart. All these species have local distribution.

1988

Иванов В.Д. Строение палеозойских ручейников семейства Microptysmatidae (Insecta). - Палеонтол. ж., 3 (1988): 64-69.

Ivanov V.D. Structure of palaeozoic caddisflies family Microptysmatidae (Insecta). - J. palaeont. (USSR), 3 (1988): 64-69. The morphology of extinct palaeozoic (P₃) caddisflies of genus Kamopanorpa Mart. is investigated, including re-description of K. rotundipennis Martynov. There were warts on the heads and pronota of these caddisflies, mouthparts were reduced; the pterothorax was similar to that of Mecoptera, but had distinct medial and parapsidal sutures. Leg spurs were long, spur formula 3(4?) - 4 - 4. Male genitalia were

1988 (contd.)

consisted of 2-segmented gonopods and, probably, parameres; the aedeagus was bilobed in the tip, tergum X was bilobed and broad. Female terminalia included 2-segmented cerci and 2 pairs of long internal apophyses.

Спурис З.Д. Обзор фауны ручейников СССР. - Известия АН Латв. ССР, 1988 (6) : 88-92. (No. 491).

Spuris Z.D. A review of the USSR fauna of caddisflies. - Latv. PSR Zinātņu Acad. Vēst. 6 (491): 88-92.

Results of faunistic investigations of caddisflies in the USSR are summarized. The fauna comprises 727 species; there are 323 species in the European part, 160 in Caucasus, 216 in Siberia, 247 in the Far East, 105 in the Middle Asia. The last territory seems to have rich yet unexplored fauna.

1989

Иванов В.Д. Действие сочленений крыльев ручейников (Insecta, Trichoptera) в полете. - Энтомол. обозр., 68, (I): 9-19.

Ivanov V.D. Action of wing articulations of caddisflies (Insecta, Trichoptera) in flight. - Entomol. Rev. (USSR), 68 (1): 9 - 19. Wing joint movements of 7 species from 6 families are studied by high-speed filming and flashlight photography. The horizontal hinge between notum and 1st axillary plate provides up-and-down movements. The vertical hinge on the base of radial vein facilitates horizontal rotation of the wing. The torsion hinge on the radial vein provides a basis for pronation and supination. The movements of 3rd axillary plates, posterior notal processes, and lateropostnota are dissimilar in fore and hind wings and varies in different species. Movable posterior notal processes in the fore wing bases of primitive Rhyacophilidae and Phryganeidae are shifted during wing strokes by lateropostnota. The higher caddisflies have wing locking in flight and lost the mechanism mentioned above; their 3rd axillary plates were detached from nota by ligaments or 4th axillary plates. The 3rd axillary plate of hind wing usually rotates with the 2nd one. The posterior notal processes in some species are bent upside during downstroke

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