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Maria BOMBÓWNA

Hydrochemical characteristics of the Białka Tatrzańska stream.

Acta Hydrobiol., 10, 27-37.

[in Polish with English summary]

Abstract - Białka Tatrzańska is the first right-side tributary of the river Dunajec (affluent of the Vistula). Analyses were carried out at 8 stations in May, August, and November 1962, and April 1963. In the comparatively short stream (ca. 40 km) two different zones are distinguished: the oligotrophic zone in the upper course of the Białka within the area of the granite massif of the High Tatra Mts, and the mesotrophic one in the middle and lower course of the stream, wearing its bed in sedimentary rocks, mainly calcites and dolomites. The geological structure is here one of the most important factors responsible for the chemical composition of the water in the stream.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Maria BOMBÓWNA and Stanisław WRÓBEL

The chemical composition of the water of the Wisłok in the region of Krosno and its pollution with heavy metals (Cu, Cr, Ni).

Acta Hydrobiol., 10, 439-452.

[in Polish with English summary]

Abstract - The report describes the pollution of the water in the river Wisłok in the region of Krosno with heavy metals (Cu, Cr, Ni) and cyanides in relation to the chemical composition of the water. By analysis carried out at various water levels three times a year it was established that this kind of pollution explained why the section of the river polluted with the sewage from the stream above was so very long. The comparison of the results of hydrochemical and hydrobiological investigations showed that a high concentration of heavy metals and cyanides transformed the river into desert, while even a low one affected most unfavourably the communities involved in self-purification.

Authors' address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Halina BUCKA, Łucja KRZECZKOWSKA-WOŁOSZYN and Krystyna KYSELOWA

On some green algae species of the genus *Uva* Playfair 1914.

Acta Hydrobiol., 10, 433-437.

Abstract - In the plankton of the carp ponds at Gołysz *Uva elongata* and *U. casinoënsis* have been found while *U. squarrosa* in the seston of the Soła river (Vistula tributary). *U. elongata* and *U. squarrosa* were not hitherto reported from Poland; as to *U. casinoënsis* it is the second station in the country.

Authors' address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Halina BUCKA, Łucja KRZECZKOWSKA-WOŁOSZYN and Krystyna KYSELOWA
Some planktonic algae in the ponds of Golysz and Landek.

Acta Hydrobiol., 10, 415-425.

Abstract - Remarks are given on plankton algae: new for Poland - *Trachelomonas hispida* var. *caudata*, *T. pseudocaudata*, *T. pseudofelix*, *Strombomonas gibberosa*, *S. gibberosa* f. *spiralis* (Euglenophyta), *Dichotomococcus Hoefleri* (Xanthophyceae) and *Siderocelis oblonga* (Chlorococcales); noted previously from regions now beyond the Polish borders (USSR) - *Trachelomonas granulata*, *Strombomonas longicauda*, and from the present territory of Poland (Provinces of Gdańsk and Opole) - *Trachelomonas hispida* var. *punctata*, *Micrasterias Mahabuleshwariensis* var. *Wallichii* (Conjugales); known only from some stations in Poland - *Trachelomonas allia*, *Pediastrum duplex* var. *genuinum* f. *gracilis*, *P. simplex* var. *radians*, *Elakatothrix acuta* (Chlorococcales) and *Staurastrum pilosum* (Conjugales); new only for the investigated area (District of Cieszyn) - *Trachelomonas oblonga* and *Cryptomonas erosa* (Cryptophyceae).

Authors' address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Adam S. BURSA

Epicenoses on *Nodularia spumigena* Mertens in the Baltic Sea.

Acta Hydrobiol., 10, 267-297.

Abstract - Nearly five years research on the phenology of *N. spumigena* epicenoses in the Gulf of Gdańsk made it possible to distinguish over 30 epibiontic species of different ecological origins. Newly described here are heterokonts, *Rhizochloris nodulariae* and *Rhizochloris solitaria*, whose salinity tolerance was partially determined. Spring and summer successions of different epibiontic bacteriophyta and flagellated organisms are described. Prelimnic and limnetic phases in the development of microflora ecosystems preceding the Yoldia Sea are distinguished. Contemporary Baltic ecosystems originated under the influence of hydrographic, geological and biotic changes associated mainly with the last Scandinavian glaciation.

Author's address: Fisheries Research Board of Canada, Arctic Biological Station, Ste. Anne de Bellevue, Quebec, Canada.

Henryk CHUDYBA

***Cladophora glomerata* and concomitant algae in the river Skawa. Distribution and conditions of appearance.**

Acta Hydrobiol., 10, 39-84.

Abstract - The studies aimed at a detailed working out of the distribution of *Cladophora glomerata* and concomitant algae in the river Skawa (a right Vistula tributary). An attempt was made to determine and describe the community with *Cladophora glomerata*. The paper also contains a short description of the terrain under study and gives the general characteristics of the environment in which the investigation was carried out.

Author's address: Katedra Botaniki, Wyższa Szkoła Rolnicza, Olsztyn-Kortowo, Poland.

Bazyli CZECZUGA¹, Fabian GRĄDZKI² and Ewa BOBIATYŃSKA-KSOK¹

Primary production in a chosen site of the river Płoska. 1. Phytoplankton production.

Acta Hydrobiol., 10, 85-94.

[in Polish with English summary]

Abstract - Primary production (including nanoplankton) was investigated during summer months by means of the ^{14}C method. Some data concerning the chemistry and quantitative proportions of chlorophyll of the water of the river are also given. The most intensive production occurred at a depth of 0.5 m. The greatest phytoplankton production as a whole was noted in June and the first two weeks of July (0.6-131.2 mg C m $^{-3}$); nanoplankton production consisted of 57-99% of the total phytoplankton production.

Authors' addresses:

¹ Katedra Biologii, Akademia Medyczna, Białystok, Poland

² Katedra Fizyki Lekarskiej, Akademia Medyczna, Białystok, Poland.

Józef FLIS

Anatomicohistopathological changes induced in carp (*Cyprinus carpio* L.) by ammonia water. 1. Effects of toxic concentrations.

Acta Hydrobiol., 10, 205-224.

Abstract - Carp (*Cyprinus carpio* L.) were treated with an ammonia water concentration after it had been established to be toxic for this species of fish under aquarium conditions. It caused regressive changes in the carp, mainly in the organs directly exposed to the action of the poison, such as the skin, gills, and intestine; these changes were necrobiotic in character and induced necrosis as well as disturbances in the circulatory system such as congestions and haemorrhages.

Author's address: Wojewódzki Zakład Higieny Weterynaryjnej, Olsztyn, Poland.

Józef FLIS

Anatomicohistopathological changes induced in carp (*Cyprinus carpio* L.) by ammonia water. 2. Effects of subtoxic concentrations.

Acta Hydrobiol., 10, 225-238.

Abstract - A prolonged action of ammonia water on carp (*Cyprinus carpio* L.) at a concentration which had been established to be subtoxic proved to be more harmful than a short treatment with a toxic concentration. Vast and far reaching necrobiotic and necrotic changes and tissue disintegration occurred in the carp organs. Together with these changes defence reactions were observed in the form of an abundant mucus secretion and profuse cell infiltrations.

Author's address: Wojewódzki Zakład Higieny Weterynaryjnej, Olsztyn, Poland.

Zbigniew GŁOWACIŃSKI

Studies on the fauna of mayflies (Ephemeroptera) in the environs of Cracow.

Acta Hydrobiol., 10, 103-130.

[in Polish with English summary]

Abstract - The mayfly fauna of the investigated area is quite rich (a total of 38 species was collected) and shows great ecological variety. Its core is constituted by submontane and eurytopic species. Montane and typical lowland species are also in evidence. In the material a species new to the fauna of Poland (*Caenis rivulorum*), 1 undetermined specimen of systematic rank of the *Ecdyonurus* genus, and 7 species which are new to the vicinity of Cracow were determined. The abundance of larvae in the individual localities changes significantly in respect to time and is dependent on definite habitat factors.

Author's address: Zakład Ochrony Przyrody, Polska Akademia Nauk, Kraków, Poland.

Eugeniusz GRABDA and Danuta WALUGA

Contribution a la pathologie de l'esturgeon occidental - *Acipenser sturio* L..

Acta Hydrobiol., 10, 131-135.

Abstract - In the lower segment of the river Wisła (near Chełmno) a female *Acipenser sturio* L. was caught, as she was very weak and died in a short time. This fish measured 281 cm and weighted 136 kg. 35 kg of eggs, partly resorbed, was taken from the abdominal cavity. The sickness was caused by auto-intoxication due to the excessive resorption of non-excreted eggs, as shown by anatomo- and histo-pathologic investigations. In the intestine near the duodenum curve a tissue "plug" was found that almost entirely closed the lumen. It was found by histo-pathologic analysis that it was a strongly developed initial part of valvula spiralis, like a thick walled pocket.

Authors' address: Zakład Chorób Ryb, Wyższa Szkoła Rolnicza, Olsztyn-Kortowo, Poland.

Maria KLIMCZYK-JANIKOWSKA

Der Döbel (*Leuciscus cephalus*) aus dem Flussgebiet des Dunajec.

Acta Hydrobiol., 10, 349-372.

[in Polish with English summary]

Abstract - The population of the chub from the Dunajec basin does not differ essentially either biometrically or with regard to the rate of growth and mode of nutrition from the previously investigated populations from the Upper Vistula, Soła, and San. Apart from the typical form *L. cephalus cephalus* no other forms were found within this population. Individuals living in mountain rivers (Dunajec, Soła) have longer fins, especially the dorsal and anal ones, than those from submontane and lowland rivers (San, Vistula).

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Marta KOWNACKA and Andrzej KOWNACKI

The influence of ice cover on bottom fauna in the Tatra streams.

Acta Hydrobiol., 10, 95-102.

[in Polish with English summary]

Abstract - The ice cover does not prevent development of bottom fauna. Under ice the stones were not covered with algae while in places free of ice the stones were covered with thick layer of algae (*Hydrurus foetidus*). Only several species prefer clearly spots free of ice. The species found in this habitat (*Paraorthocladius nudipennis*, *Euorthocladius rivicola*) live in alga *Hydrurus foetidus* in which they find a favourable food environment.

Authors' address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Andrzej KOWNACKI and Marta KOWNACKA

Die Larve des *Nilotanytus dubius* (Meigen) 1804 (Diptera, Chironomidae).

Acta Hydrobiol., 10, 343-347.

Abstract - A description of larvae and ecology of *Nilotanypus dubius* are presented.

Authors' address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Tadeusz KUFLIKOWSKI

Vegetation of the Goczałkowice dam reservoir in the years 1964-1966.

Acta Hydrobiol., 10, 163-178.

[in Polish with English summary]

Abstract - Observations of the changes in the composition and distribution of vascular plants in the Goczałkowice Reservoir have been carried since 1954 when it was first filled with water. In 1965 a lowering of the water level lasting several months resulted in nearly complete destruction of the water plant sprouts on the emerged area. This was also the cause of distinct changes in the vegetation in the following year. The species distribution in the particular years is shown on the maps.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, Hydrobiological Station, Goczałkowice, Poland.

Alicja MLECZKO

The vertical distribution of zooplankton in the Goczałkowice Reservoir in the years 1957-1959.

Acta Hydrobiol., 10, 373-393.

Abstract - The paper reports the results of investigations carried out in a water reservoir on the river Vistula in the third, fourth, and fifth year after its filling. The presence of a considerable quantity of allochthonous suspended matter bringing about almost throughout the year a very small transparency of water is related with the submontane character of the reservoir. Owing to the small depth and small extent of the reservoir its water is readily mixed by the winds down to the bottom, this being marked both in the vertical distribution of animal plankton and in the very frequently occurring equalization of temperature in the entire vertical water column. During long-lasting fine weather the zooplankton concentrated down to a depth of 5 m, with a maximum concentration of rotifers at a depth of 3 m. The mean density of animals decreased in the successive years from 2400 to 780 ind. L⁻¹. In 1957 the number of rotifers 6 times exceeded that of cladocerans, whereas in 1959 they were only 4 times more numerous. The specific composition of the pelagic part of the reservoir contained, apart from ubiquitous forms and forms typical of shallow reservoirs and of the inshore zone of lakes, some eulimnetic species reported as characteristic of lakes (*Daphnia cucullata*, *Bosmina coregoni*, and *Leptodora kindti*).

Author's address: Miejskie Przedsiębiorstwo Wodociągów i Kanalizacji, Tarnów, Poland.

Teresa MROZIŃSKA-WEBB

***Spirogyra papulata* Jao from the pond Mokry on Mt Babia Góra.**

Acta Hydrobiol., 10, 413-414.

Abstract - The species *Spirogyra papulata* Jao (1935) described from Szechwan, China, was found in the pond Mokry situated on the northern slope of Mt Babia Góra at 1025 m, in June 1964. This is the first record of this species from Poland.

Author's address: Instytut Botaniki, Polska Akademia Nauk, Kraków, Poland.

Kazimierz PASTERNAK

Characteristics of the substratum of the River Dunajec catchment basin.

Acta Hydrobiol., 10, 299-317.

[in Polish with English summary]

Abstract - The aim of this work was to characterize the morphology, the geological and soil structure of the catchment basin, the quality of bottom sediments, and the chemical composition of water of the River Dunajec. It was found that there exists a close relationship between the quality of the water and bottom sediments of the river and the physico-chemical and morphological properties of the substratum of its catchment basin.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Kazimierz PASTERNAK

The chemical composition of waters of rivers and streams from drainage areas built of various rocks and soils.

Acta Hydrobiol., 10, 1-25.

[in Polish with English summary]

Abstract - Investigations were carried out on the chemical composition of waters of rivers and streams whose drainage area has a substratum built of the various more important crystalline and sedimentary rocks occurring in Poland. From each kind of substratum several streams of various mean annual flow were analysed. The data obtained determine with regard to quantity the influence of the particular investigated rocks and soils formed on them on the chemical properties of river waters. They also show that the content of mineral compounds in the waters of rivers and streams depends not only on the chemical but also on the physical properties of the rocks and soils of their drainage areas.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Kazimierz PASTERNAK

Variability of the chemical composition of water in ponds of various disposition of the bottom in relation to the local level of erosion.

Acta Hydrobiol., 10, 525-532.

[in Polish with English summary]

Abstract - The paper reports the results of investigations on the water of ponds of various disposition of the bottom in relation to the local level of the surface-water flow and ground-water table of the surrounding terrain. Those data show, among other facts, that in ponds with a basin deeply sunk into the surrounding terrain the water is much richer in mineral salts than in those whose bottom lies at almost the same level as the adjoining grounds. The causes and significance of this phenomenon are dealt with in the text.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Tadeusz PENCZAK

The dace, *Leuciscus leuciscus* (L.) from the Łódź Upland and adjacent areas. 2. Materials to the knowledge of the morphology of dace.

Acta Hydrobiol., 10, 137-153.

[in Polish with English summary]

Abstract - The work is based on 260 specimens of dace from the rivers of the Łódź Upland and adjacent areas. The author has investigated the number of fin-rays, the number of scales on the lateral line, the number of gill-rakers and the shape, number and exchange of pharyngeal teeth. The description of plastic characters were based on 22 measurements. The dace from Poland, White Russia, Czechoslovakia and Romania belonging to the nominative subspecies - *Leuciscus leuciscus leuciscus* (L.) were compared. The differences observed in the investigated features are induced by the individual variation and the trophic value of rivers.

Author's address: Katedra Zoologii Systematycznej, Uniwersytet Łódzki, Łódź, Poland.

Tadeusz PENCZAK

The ichthyofauna of the rivers of the Łódź Upland and adjacent areas. 1a. The hydrography and fishes of the Bzura river basin.

Acta Hydrobiol., 10, 471-497.

[in Polish with English summary]

Abstract - In the years 1963-1966, in the basin of the river Bzura, to the mouth of the largest tributary, the Rawka, 31 species of fish and 1 species of Cyclostomata were found. This work is based on 5417 specimens caught using a direct current generator. Worthy of note is the catch of typical rheophilic species - *Cottus gobio* L. and *Phoxinus phoxinus* (L.) - in the Rawka, a lowland river of central Poland. The loach has been considered up to now a typical rheophile, but in the Bzura basin it also inhabits the lentic parts of rivers with muddy bottom and with water considerably fouled by sewers.

Author's address: Katedra Zoologii Systematycznej, Uniwersytet Łódzki, Łódź, Poland.

Tadeusz PENCZAK

The ichthyofauna of the rivers of the Łódź Upland and adjacent areas. 1b. The hydrography and fishes of the Pilica river basin.

Acta Hydrobiol., 10, 499-524.

[in Polish with English summary]

Abstract - In the years 1963-1966, 34 species of fish and two representatives of Cyclostomata were found in the Pilica basin within the boundaries of the Łódź Province. This work is based on 16,399 specimens collected independently with the aid of a generator (31 species) and also on the reports of fishing teams from the Polish Fishing Association in Łódź, on rod catches, and on information from references. Worthy of note is the quite considerable number of lithophilous species caught in the Pilica itself, in spite of the fact that in three parts covering more than 50% of the river's length within the province there is intense pollution by industrial, farm, and domestic sewers.

Author's address: Katedra Zoologii Systematycznej, Uniwersytet Łódzki, Łódź, Poland.

Stanisław SKÓRA

Auswirkung der Rückkreuzung zwischen Mischlingen von Karpfen (*Cyprinus carpio* L.) und Karauschen (*Carassius carassius* L.) auf Wachstum und Variabilität der Nachkommenschafts-Populationen.

Acta Hydrobiol., 10, 239-257.

Abstract - A comparison of two fry groups of hybrids in backcross with common carp and crucian carp showed the very great influence of the species of the male parent, especially on the growth, system of the pharyngeal teeth, and length and thickness of the barbels. The influence of the male which took part in the cross on other morphologic and meristic features of back hybrids was unquestionable, but not so essential as its influence on the above-mentioned features.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Krzysztof SMAGOWICZ

Fauna of two puddles from melting snow in the Gorce Range (Western Carpathians).

Acta Hydrobiol., 10, 259-264.

[in Polish with English summary]

Abstract - In the transient spring puddles on Mt. Turbacz (altitude 1170 m) twelve animal species were found. They belonged to the following groups: Testacea, Rotatoria, Cladocera, Copepoda, Ostracoda, Diptera, and Hydracarina. In one litre of water there were 56 specimens of *Cyclocypris laevis*. All developmental stages of *Acanthocyclops vernalis* were found, while only adult specimens of *Diacyclops crassicaudis* were observed. The specimens of *Keratella serrulata* had slightly differently developed loricae. Animal species found in the puddles were typical of drying water reservoirs. Some physico-chemical data of studied puddles are also given.

Author's address: Katedra Hydrobiologii, Uniwersytet Jagielloński, Kraków, Poland.

Karol STARMACH

***Homoeothrix fusca* and its forms in the Lake Wielki Staw in the Valley of the Five Polish Lakes (High Tatra Mts).**

Acta Hydrobiol., 10, 155-161.

Abstract - The diagnosis of blue-green alga *Homoeothrix fusca* Starm., first described from the Tatra Mts in 1934, has now been changed and completed. In the species four forms are distinguished: *H. fusca* f. *fusca*, *H. fusca* f. *minor*, *H. fusca* f. *elongata*, and *H. fusca* f. *longissima*. These were determined on the basis of material collected in September 1963 from the Lake Wielki Staw in the High Tatra Mts. The samples were taken from the edge of the lake in the undulation zone as well as from the depths of 0.5 and 5 m.

Author's address: Katedra Hydrobiologii, Uniwersytet Jagielloński, Kraków, Poland.

Karol STARMACH

***Plectonema tatraca*, a new species of blue-green algae from the Tatra Mountains.**

Acta Hydrobiol., 10, 427-432.

Abstract - The description and diagnosis is presented of *Plectonema tatraca* n. sp., found on the surface of granite stones in the oligotrophic lake Wielki Staw in the Valley of the Five Polish Lakes in the High Tatra

Mts at a depth of 5-40 m. The accompanying species of blue-green algae are also reported. The included drawing illustrates the characteristic particulars of filaments and trichomes.

Author's address: Katedra Hydrobiologii, Uniwersytet Jagielloński, Kraków, Poland.

Zbigniew WAJDOWICZ

An attempt to acclimatize lake trout from the Wdzydze lakes in the dam reservoir at Przeczyce. 1. Characteristics of the reservoir and its drainage area.

Acta Hydrobiol., 10, 395-412.

[in Polish with English summary]

Abstract - In connection with the attempted acclimatization of lake trout (*Salmo trutta* m. *lacustris* L.) from the Wdzydze Lakes in the dam reservoir at Przeczyce at the point of swelling of the river Czarna Przemsza, the author presents in this paper 1) a physiographic description of Karst terrains of the river basin and drainage area, and 2) describes the thermal conditions of the reservoir and of the section of the river above it. The investigations showed that the area of the reservoir has good thermal conditions for spawning and for the rearing of trout fry, this being chiefly due to the abundance of spring waters. The temperature of the outflowing water in the reservoir itself does not exceed 19 °C, which is the upper limit of temperatures acknowledged as being the optimum for salmonid fishes.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Irena WÓJCIK-MIGAŁA

The influence of two and three year old carp upon the benthos of ponds.

Acta Hydrobiol., 10, 179-203.

[in Polish with English summary]

Abstract - On the basis of analysis of qualitative composition, quantitative relations between various groups of benthos organisms, quantitative changes in time of total number and age group composition of predominant Tendipedidae larvae it was stated that the way of bottom fauna development in a pond quite distinctly depends upon the number and age of fish.

Author's address: Zakład Gospodarki Stawowej, Instytut Rybactwa Śródlądowego, Żabieniec, Poland.

Krystyna ZAĆWILICHOWSKA

Bottom fauna in the basin of the River Kamienica Nawojowska.

Acta Hydrobiol., 10, 319-341.

Abstract - In the described basin a dominance of rheo- and lithorheophilous species due to the prevailing stony bottom was noted. Other factors, however, contributed to the formation of different animal communities in spring trickles of the Kamienica and some of its tributaries, in small and middle-sized streams, in the upper sector of the Kamienica, in the lower part of the Kreszczaty stream, and in the middle reaches of the Kamienica and the Kamionka.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.

Jerzy ZIĘBA

A characteristic of the appearance of bottom fauna in the river Wisłok near Krosno.

Acta Hydrobiol., 10, 453-469.

[in Polish with English summary]

Abstract - The density of settlement and also in a certain measure, the composition of bottom fauna depended in most of the investigated localities on the kind and concentration of impure waste waters. Industrial inorganic drains (Cr, Ni, Cu, CN) limited very strongly the quantitative and qualitative settlement on the bottom of the Marzec stream. Organic pollution (from domestic drains, vegetal from the linen factory, and animal from the plant for fattening store animals) mainly increased the number of Oligochaeta (mostly Tubificidae) and more rarely that of the Tendipedidae. The benthos had the greatest number of species on the two upper unpolluted localities of the Wisłok, where indicator species for pure running waters commonly appeared.

Author's address: Polish Academy of Sciences, Laboratory of Water Biology, ul. Sławkowska 17, Kraków, Poland.
