

Englische Titel und Synopses der wissenschaftlichen Originalarbeiten in Ber. nat.-med. Ver. Innsbruck, Band 56 (Festschrift STEINBÖCK), 1968

KOCH, Ines: Carcinoma of the Pavement Epithelium in the Portio vaginalis and in the Cavum Oris: A Comparison Based on Longterm Statistics. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 15—29, 14 tables; original scientific paper.

Synopsis: The difference in the number of cancer frequency at the Portio vaginalis and in the oral cavity can be well documented and is shown in twelve annual tables with statistical analysis. In both cases the uncornified pavement epithelium offers a basis of comparison. The continuous traumatization in the cavum oris, however, is so enormous that reasons must be found why the number of carcinoma is so small there. The question, whether the saliva or the tonsils with their cells develop forces against the malignant growth, is put up for discussion.

EPPACHER, T.: Physiography and Zooplankton of Gossenkoellesee (2.143 m a. s. l., Kühtai, Austria). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 31—123, 6 tables, 52 figures; original scientific paper.

Synopsis: Physical and chemical conditions and zooplankton were studied on a year-round basis (69 days of field work) in this simply structured high-mountain lake of Tyrol. Gossenkoellesee is a moraine-dammed seepage lake with morphometric parameters (area 1,7 ha, max. depth 9,9 m, mean depth 4,7 m) typical for lakes above timber line. Radiation climate within the lake is determined in the open season by high energy income from sun (only 21% of astronomically possible sunshine is screened off by the horizon) and sky (intensified by reflections from surrounding snow covered slopes) and high transparency of the water (transmission > 80%/m between 370 and 600 nm). Winter cover (lasting $\frac{3}{4}$ of the year, maximum of 233 cm in May) reduces entrance of short wave radiation considerably. The lake is dimictic, though stability does not surpass 20,4 g-cm. cm⁻². Only 31% of the annual heat budget (13.300 cal. cm⁻²) is summer heat income.

Size (20 ha) and geology (siliceous rocks) of the catchment area are reflected in the chemistry of Gossenkoellesee. Conductivity ranges between 18 and 26 μ mhos. cm⁻² at 25° C. 46% of the anions (mean for total ions 0,19 meq/l) consist of bicarbonate, the rest is sulfate. Ca²⁺ (0,14—2,0 mg/l) and Mg²⁺ (0,0—0,49 mg/l) account for 42% of the cations. Free carbon dioxide varies between 0,6 and 29 mg/l, pH between 5,6 and 7,8. The water is saturated with oxygen in the icefree period, with a positive heterograde curve from icebreak (late June or July) till late November, turning into a clinograde curve in winter, with deficits up to 90%.

Of a mean of 58 zooplankters /l more than 99% belong to the copepod *Cyclops tetricus* (19%) and the rotifers *Polyarthra dolichoptera* (72%) and *Notholca squamula* (9%). All nauplius- and copepodid-stages and the sexes of the adults had been distinguished in the quantitative samples. The population dynamics of all three species are discussed in detail; information on the vertical and horizontal distribution of nauplii, copepodids and adults of *Cyclops* and the rotifers as well as on the vertical migration of the copepod and its larvae is included. A brief account of other metazoa present in the pelagial of the lake is given.

Papers on species distribution, biomass and production rate of the phytoplankton, and on *Salmo trutta* f. *fario* (the only fish of this alpine lake),

covering the same period of observation, are prepared by NAUWERCK and PECHLANER respectively.

SCHELLER, U.: New Records of Symphyla from Central and Southern Europe (Myriapoda). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 125–141, 1 figure; original scientific publication.

Synopsis: The author has studied some collections of Symphyla from Austria, Italy, France, Switzerland, Yugoslavia and Greece from zoogeographic and taxonomic points of view. Locality and habitat records are given for 294 specimens of 15 different species, mainly from the two first mentioned countries. Five species are reported from Austria for the first time, four from Italy, one from France and one from Yugoslavia. The distribution of the species is discussed. Taxonomic remarks are given in several cases, especially for the *Scutigerebella*-representatives. *Scutigerebella echinostylus* n. sp. is described and its taxonomic status discussed.

PECHLANER, R.: Accelerated Eutrophication in the Piburger See, Tyrol. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 143–161, 12 figures; original scientific publication.

Synopsis: Piburger See is a meromictic lake, situated in a forested area on the northern border of the Ötztaler Alpen. Physical and chemical data (Temperature, oxygen, conductivity, alkalinity, pH, $PO_4\text{-P}$, total-P, nitrate- and ammonia-nitrogen, and silica) from 1963 to 1968 are compared with similar information available for the years 1931 to 1933. Although protected by conservation laws, this trout lake suffers from pollution. Obviously phosphorus is the key nutrient. The concentrations of phosphorus are not very high (total-P between February 1966 and 1967 averaging $19,5 \mu\text{g/l}$ (45 analyses), mean concentration of phosphate being $2,6 \mu\text{g } PO_4\text{-P/l}$ (42 analyses)), but by the increasing availability of this nutrient organoproduction and oxygen consumption have reached already a critical level. Winter kills are predicted for the near future, if eutrophication is not stopped or reversed. For the optical properties, for phytoplankton and pelagic primary production of Piburger See the reader is referred to the paper of I. FINDENEGG (1968, Ber. nat.-med. Ver. Innsbruck, 56: 163–176); the fish population is discussed by W. KOLDER (Acta hydrobiol. (Cracow), in press).

FINDENEGG, I.: The Phytoplankton of the Piburger See in 1966. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 163–176, 6 figures; original scientific publication.

Synopsis: The amount and the taxonomical composition of the phytoplankton was examined by monthly series of samples from different depths. The lake is small, surrounded by woods, and 24 m deep. It is meromictic and eutrophicates rapidly. Graphs are given showing the seasonal variations of stratification of the important taxa and the relationship to temperature and light conditions. The algal biomass beneath the surface unit was greatest in May (17 g/m^2) and composed of *Ochromonas*, *Dinobryon* and *Cryptomonas*. A second peak (8 g/m^2) was reached in August. All the year round diatoms and blue-green algae were of little importance. Comparisons are made with a similar lake (Goggausee), and the specific properties of the eutrophication in small meromictic lakes are discussed.

ETTL, H.: A Contribution to the Knowledge of the Algal Flora of Tyrol. Ber. nat.-med. Ver. Innsbruck, 56 (1958, Festschrift STEINBÖCK): 177—354, 38 plates with 335 figures; original scientific publication.

Synopsis: Interesting, little known and new flagellates and algae (excluding diatoms and desmids) from the small waters and peat-bogs in the environment of Innsbruck, Seefeld, Obergurgl and Kühtai (700, 1200, 2000 and 2300 m. a. s. l.) are described and pictured. The morphology and taxonomy of the taxa is discussed and compared with the data of other authors. Most of the taxa were observed and drawn in living stage immediately after collection. The following new taxa are described in this paper: *Chromulina suprema* var. *gracilis*, *Chrysococcus diaphanus* var. *ellipsoideus*, *Lepochromulina calyx* fo. *cylindrica*, *Arthrochrysis gracilis*, *Chrysopyxis pitschmannii*, *Heliochrysis eradians* var. *stigmatica*, *Gloeobotrys sphagnophila*, *Gloeobotrys bichlorus*, *Characiopsis ambrosiana*, *Cryptomonas erosa* var. *lobata*, *Cryptomonas rapa*, *Cryptomonas pusilla* var. *bilata*, *Cryptomonas spinifera*, *Carteria reischlii*, *Chlamydomonas pumilio* var. *ovoides*, *Chlamydomonas obergurglii*, *Chlamydomonas muciphila*, *Chlamydomonas dauciformis*, *Chlamydomonas chlorastera*, *Sphaerello cystis pallens*, *Sphaerello cystis globosa* fo. *minor*, *Acrochasma unicum* fo. *apodum*, *Characium ornithocephalum* var. *longisetata*, *Elakatothrix gloeocystiformis* var. *ovalis*.

KOFLER, A.: On the Accompanying Fauna of *Quedius (Miscrosaurus) ventralis* (ARAG.) (Coleoptera, Staphylinidae). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 355—360, 1 figure; original scientific publication.

Synopsis: In large-scale collection of various groups of animals ecological data are frequently lost, therefore faunistic lists tell rarely about the ecology of the species. Here the way was chosen to mention and discuss all arthropods associated with a rare Staphylinid in a rotten beech tree at Lavant near Lienz, East Tyrol. Of the 25 species found 2 belong to pseudoscorpions, one species is a harvestman and 22 species are beetles. Among them the following species are mentioned first for the fauna of East Tyrol: *Mitostoma carinatum* (Opiliones); *Scaphosoma subalpinum*, *Quedius ventralis*, *Abraeus granulum*, *Mycetophagus populi*, *Cerylon fagi*, *Cryptophagus pallidus* (Coleoptera).

THALER, K.: On the Occurrence of *Porrhomma*-species in Tyrol and Other Countries of the Alps (Arachnida, Araneae, Linyphiidae). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 361—388, 9 figures; original scientific publication.

Synopsis: This report deals with the *Porrhomma*-spp. collected by the author in Tyrol and Vorarlberg, together with some materials from Switzerland, preserved at the "Naturhistorisches Museum", Basel. The following species have been found: *Porrhomma oblitum* (O. P. CAMBRIDGE), *P. pygmaeum pygmaeum* (BLACKWALL), *P. pygmaeum convexum* (WESTRING), *P. pygmaeum myops* (SIMON), *P. microphthalmum* (O. P. CAMBRIDGE), *P. subterraneum* SIMON (?), *P. campbelli* F. O. P. CAMBRIDGE, *P. egeria moravicum* (MILLER & KRATOCHVIL), *P. pallidum* JACKSON. The forms are characterized and their areals, their distribution within the Alps and their habitats are discussed. Records on the occurrence of *Porrhomma*-species in the Alps scattered in the literature are discussed too. Finally, a short survey on the members of that genus is given.

SCHEDL, W.: The Tyrolese Forest Dormouse (*Dryomys nitedula intermedius* (NEHRING, 1902) (Rodentia, Muscardiidae)). A Contribution to the Knowledge of its Distribution and Ecology. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 389—406, 5 figures; original scientific publication.

Synopsis: The history of the taxonomy and nomenclature of this forest dormouse is discussed, which has its locus typicus in Eastern Tyrol. The subspecies is shortly characterized and compared with the neighbouring *D. n. carpathicus*. A list and a map of 71 places, where specimens of *D. n. intermedius* have been found, shows its distribution in the Alps and northern Dinarid Alps. Related subspecies are probably in the Balkans. The Tyrolese Forest Dormouse prefers ecotopes in a mountaineous environment with mixed forests and scrubs of deciduous trees. Some notes are given on nest-building, diet and hibernation. An ectoparasite, *Monopsyllus sciurorum* (SCHRANK) (Siphonaptera), is recorded for the first time on this host.

TILZER, M.: Extreme Fluctuations of the Ionic Content in a Mountain Stream on the Border between Limestone and Siliceous Rocks. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschr. STEINBÖCK): 407—410, 2 figures; original scientific publication.

Synopsis: The influence of geologically different mountain-ranges on the water chemistry of the drainage system is demonstrated for the river Rosanna (Austria) by year-round samples and calculations: The larger the proportion of a catchment area of certain geology, the higher is its influence on the chemistry of the water of the main river. With growing water discharge the geological properties of the catchment area of the bigger tributary exert an increasing influence on the conductivity and the ionic composition of the main river. In the Rosanna conductivity varies between 44 and 237 μmhos (at 18° C), the equivalent proportion Ca: Mg varying between 2,8 and 18,4. The river transports per second 21 to 560 g Ca^{2+} and 2,8 to 18,4 g Mg^{2+} respectively.

KLIMA, J.: The Cell as an Automaton. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 411—420, 1 figure; original scientific publication.

Synopsis: Since J. v. NEUMANN has given evidence for the logical correctness of self-reproducing automatons, different biologists try to simulate a biological cell as an automaton. Two examples of the literature are discussed and two new models, one for „a naked gen” and one ionic flow simulating model of *Chlorella* are described and discussed.

KOCH, Ines: The Combination of Staining Technique and Phase Contrast Microscopy for the Counting of Bird Blood Corpuscles in the Counting Chamber. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 421—425, 2 figures; original scientific paper.

Synopsis: A combination of two methods is described, providing advantages if blood corpuscles of birds have to be counted: The blood is diluted with a reagent based on the GIEMSA standard solution, is put lege artis into the counting chamber after 24 hours and microscoped with the phase contrast equipment of ZERNIKE (REICHERT, Vienna). Memory of the twentieth anniversary of Gustav GIEMSA's death.

MOSTLER, H.: New Holothurian Sclerites from Norian „Hallstätterkalke” (Northern Calcareous Alps). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 427—441, 1 figure, 4 plates; original scientific publication.

Synopsis: From the „Hallstätterkalke” of norian age there are described Holothurian sclerites connected by a common feature with only one exception. Altogether there have been set up 1 family, 3 genera and 12 species as new forms. The sclerite types which have been described from recent holothuroids of the order Elasipoda, even restricted to family Elpidiidae, were found now in norian strata. This fact proves that the order Elasipoda and the family Elpidiidae are dating back to Upper Triassic.

Thus, a further order of Holothuroids with one family can be added to the 4 fossil orders formerly existing.

PLATTNER, H.: Ultrastructural Organization of the Mammalian Liver as Revealed by Freeze-etching. Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift STEINBÖCK): 443—462, 5 plates; original scientific publication.

Synopsis. For the first time an investigation of the intravital ultrastructure of mammalian liver (mouse; parenchymal cells, sinusoidal endothelium, perisinusoidal fat storing cells) was carried out by means of the freeze-etching-method. The results affirm most part of the observations obtained by common methods on ultrathin sections of chemically fixed material.

Some points of controversy dealing with artifacts, could be cleared: Interlocking-structures on the lateral cell membranes of hepatocytes are intravital structures.

The width of the perisinusoidal space (= „Disse space”) may be developed in a very different way, even in adjacent regions:

a) as a distinct space between microvilli-carrying hepatocytes and a discontinuous lining of endothelial cell-processes;

b) but the „perisinusoidal space” may be found also as a narrow intercellular space of common width only; this is the case esp. underneath the parts of sinusoidal endothelial cells containing the nucleus.

A new aspect is the evidence, that freeze-etching reveals partly the surface of membranes and partly inner membrane structures.

SELLNICK, M.: Two new *Pergamasus*-species from Austria (Acari, Mesostigmata). Ber. nat.-med. Ver. Innsbruck, 56 (1968, Festschrift Steinböck): 463—472, 1 figure; original scientific publication.

Synopsis: The mites *Pergamasus tirolensis* SELLNICK and *Pergamasus bavariensis* SELLNICK, found in Tyrol in litter and soil under larches, are described in detail. ‚*Holoparasitus tirolensis* SELLNICK’ and ‚*Pergamasus bavarius* SELLNICK’, under which names these species show up in a table of JAHN (1967, Ber. nat.-med. Ver. Innsbruck, 55, p. 74), are nomina nuda.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Berichte des naturwissenschaftlichen-medizinischen Verein Innsbruck](#)

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