

## SCIENTIFIC SERIALS

*Poggendorff's Annalen der Physik und der Chemie.* No. 3, 1873.—This number commences with a paper by Dr. Oudemans, jun., on the influence of optically inactive solvents on the rotatory power of optically active substances. The author, employing a Wild polariscope and lime-light, experimented with cane-sugar, cinchonin, brucin, phlorizin, and other substances, with water, chloroform, alcohol, ether, &c., as solvents. He unexpectedly found that the specific rotatory power of cinchonin in various mixtures of alcohol and chloroform had not values entirely intermediate between those of cinchonin in either solvent separately (which are  $\dagger 212^\circ$  and  $\dagger 228^\circ$ ). It rises to a maximum of over  $\dagger 237^\circ$  in a mixture of 10 per cent. alcohol and 90 per cent. chloroform. He further compared the influence of different solvents on the specific rotatory power of active substances, with their solvent action, and he considers the greater values of the former property correspond with a greater solubility of the active substance. The numerical results are given in full.—Julius Thomsen continues his "Thermochemische Untersuchungen," examining, in this paper, the affinities of the constituents of water, of sulphuretted hydrogen, of ammonia, and of carburetted hydrogen. He finds that while there is development of heat in the formation of marsh gas, there is absorption in the formation of ethylene and acetylene, from carbon and hydrogen. The author gives a *résumé* of results from the series of researches here terminated (the affinity of hydrogen to the metalloids), which presents some points of considerable interest.—In the next paper Prof. Lubimoff of Moscow calls attention to an error current in most text-books on physics. The field of view in a Galilean telescope is stated to depend on the size of pupil of the observer's eye, and to be measurable by the angle under which this will appear from the centre of the object-glass. This, he says, gives a value five or six times smaller than the actual, which is directly dependent on the size of aperture of the object-glass. He explains and illustrates his new theory at some length.—F. Rüdorff contributes the first part of a paper on the solubility of saline mixtures, and Ed. Ketteler continues his mathematical inquiry into the influence of astronomical motions on optical phenomena.—Among the extracted papers may be specified those by Edlund on galvanic resistance, by Braun on direct photography of the solar protuberances, and by Baumhauer on hygrometry in meteorological observatories.

*Der Naturforscher* for April 1873, contains a large amount of varied and interesting scientific matter. In Physics and Chemistry, there are short accounts of M. Jamin's researches on condensation of magnetism, Dr. Mayer's on measurement of sound, M. Cornu's new method of determining the velocity of light, Herr Feddersen's paper on thermo-diffusion of gases, Herr Nasse's on the nitrogen in albumenoids, Clerk-Maxwell's lecture on action at a distance, &c. Herr Nasse finds that, in the albumen-molecule, one portion of the nitrogen is combined loosely, another much more intimately, and he sets himself to determine the proportion of loosely-combined to the entire nitrogen-contents, in various albuminous substances. His observations have an important physiological bearing. In biology proper, we may note a paper giving the results of Herr Stohmann's recent study on animal nutrition. This author endeavours to formulate mathematically the digestibility of food stuffs. P. Secchi's recent communication on the solar protuberances and spots is given, and there is a meteorological paper on the temperature of air in woods and in the open, describing experiments by Herr Ebermayer. We may further call attention to a note on Baranetzky's experiments on the periodicity of outflow of sap in plants, a phenomenon he finds based on the periodical action of light. Geology, geography, technology, &c., are also represented in this serial, and the weekly "Kleinere Mittheilungen" furnish a number of well-selected scientific data.

## SOCIETIES AND ACADEMIES

LONDON

Geological Society, May 14.—Mr. Joseph Prestwich, F.R.S., vice-president, in the chair.—The following communications were read.—"On the genus *Palaocoryne*, Duncan and Jenkins, and its affinities," by Prof. P. Martin Duncan, F.R.S.—In this paper the author referred to certain minute fossils from the Carboniferous rocks of Scotland, described by himself and Mr.

Jenkins in a paper read before the Royal Society, as belonging to the Hydroids, and most nearly resembling the recent genus *Bimeria*, Wright. He stated that numerous specimens since received threw some further light on the nature of these fossils, and showed especially that in all probability the base is not really cellular, but that the cellular appearance is produced by the growth of the real base of the polype over the cells of the *Fenestella* on which it grows.—"Notes on Structure in the Chalk of the Yorkshire Wolds," by Mr. J. R. Mortimer.—In this paper the author described a peculiar structure observable in chalk from Yorkshire and elsewhere, giving it a striated appearance. This structure had been ascribed by Dr. Mackie and others to slickensides. The author adduced reasons for doubting the mechanical origin of these striations, and argued that they are of an organic nature. He ascribed them to corals, and remarked that similar striæ occur in all limestone formations.—"On *Platysiagum scelocephalum* and *Palaospinax triscus*, Egerton," by Sir P. de M. Grey-Egerton, Bart., M.P., F.R.S.—The two species of fossil Fishes noticed in this paper were described by the author in the 13th Decade of the Memoirs of the Geological Survey, published in 1872. They are both from the Lias of Lyme Regis. He now described some new specimens which add to our knowledge of their characters. An example of *Platysiagum* shows the position of the dorsal fin, which is placed very far back, occupying a place opposite to the interval between the ventral and anal fins, and the form of the trunk, which is of nearly uniform depth from the occiput to the base of the dorsal fin. The structure of the dorsal fin was described in detail. The new specimen of *Palaospinax triscus* shows especially the position of the second dorsal spine, which is placed over the 50th vertebra, the first being on the 16th, the fish thus most nearly approaching the existing *Cestracion*, which it also resembles in its dentition. In other respects it seemed to be most clearly allied to *Acanthias*.—"On a new genus of Silurian Asteriadae," by Mr. Thomas Wright, F.R.S.E.—The specimen described showed the outline of a small Starfish, with a large disc and short rays, in a slab of Wenlock Limestone from Dudley. The outline of the ten rays was described as marked out by the border of small triangular spines, the other plates of the disc and rays being absent. Each ray was terminated by a stemlike multiarticulate process as long as the ray, from towards the extremity of which spring slender lateral processes, giving it a tufted appearance. This Starfish, which is in the collection of Dr. Grindrod, is named by the author *Trichotaster plumiformis*.

Zoological Society, May 20.—Dr. E. Hamilton, vice-president, in the chair.—Lord Arthur Russell exhibited specimens of, and made remarks upon, the different varieties of the Carp (*Cyprinus carpio*) cultivated in the German fish-ponds.—Mr. Sclater offered some remarks upon the most interesting animals observed in the Gardens of some of the continental Zoological Societies which he had lately visited.—Dr. E. Hamilton read a note confirmatory of the extraordinary fecundity of the Chinese Water-Deer (*Hydropotes inermis*).—Mr. H. E. Dresser exhibited some rare birds from the Ural, amongst which were the Smew (*Mergus albellus*) in down, nestlings of the Rustic Bunting (*Zonberiza rustica*) and several specimens of Lilljeborg's *Salicaria magnirostris*, which last he believed to be identical with *Acrocephalus dumetorum* of India.—Sir Victor Brooke, Bart., read a paper on the African Buffaloes, which he considered might be reduced into two species, *Bubalus caffer* and *Bubalus fumilus*. Of these the latter exhibited two varieties in the western and eastern points of its range, while the former appeared to extend from the Cape up the eastern coast to Abyssinia without any material variation.—Mr. St. George Mivart, F.R.S., read a memoir on *Lepilemur*, *Cheirogalus*, and other Lemurine forms, to which were appended remarks on the Zoological rank of the Lemuroidea in the natural system.—Messrs. Sclater and Salvin communicated a paper on some Venezuelan Birds collected by Mr. James M. Spence, amongst which were examples of two species believed to be new to science, and proposed to be called *Lochinia sororia* and *Crypturus cerviniventris*.—A communication was read from Mr. R. Swinhoe, on the White Stork of Japan, which he referred to a species different from the *Ciconia alba* of Europe, and proposed to call *C. boyliana*.—Mr. H. E. Dresser read some notes on certain oriental species of Eagles (*Aquila*).

Royal Horticultural Society, May 16.—General meeting, —Viscount Bury, M.P., president, in the chair.—The resignation of the Assistant-Secretary was announced.—The Rev. M. J. Berkeley, who was then called to the chair, commented on the