gebilde werden smaragdgrün, die Kerne der den ganzen Fuß bedeckenden Epithelzellen blau, deren Cuticula und etwa noch vorhandene Wimpercilien roth.

Auch an Wirbelthiergeweben habe ich die zwei- und dreifache Färbung mit Erfolg probirt. So gibt zum Beispiel ein dünner, in oben genannter Weise behandelter Querschnitt durch den Rattendarm (Alcoholpraeparat — Gefäße roth injicirt) folgendes Bild: die gesammte Musculatur erscheint roth, die Muskelkerne sind sehr distinct blau. Drüsige Elemente werden mit herrlicher Kernfärbung grün. In den Cylinderepithelzellen der Zotten ist der Kern tiefblau, die Cuticula hellroth gefärbt.

Unter vielen versuchten Methoden habe ich die oben genannte am besten gefunden. Doch nicht jeder Schnitt liefert ein schönes und deutliches und in jeder Beziehung scharfes Bild. Bildet der Schnitt eine zu große Fläche, oder ist er nicht fein genug, oder läßt man die eine oder die andere Flüssigkeit zu lange oder nicht lange genug einwirken, so entstehen gar manchmal verschwommene Bilder, namentlich zwischen Blau und Grün. Im Allgemeinen läßt sich über die Einwirkungszeit der einzelnen Farbstofflösungen wenig sagen, der Concentrationsgrad kommt sehr in Betracht; und es muß eben Jeder mit den von ihm gewählten Objecten einige Versuche machen, ehe er ein gewünschtes und gutes Resultat erzielt.

Mülhausen i. E., Januar 1883.

2. Linnean Society of London.

15th February, 1883. — Mr. J. Jenner Weir exhibited a perfect Hermaphrodite Butterfly (*Lycaena icarus*) and a blue male and a brown female of the same species for comparison. The Hermaphrodite in question possesses two spotless blue wings on the left, and two spotless brown wings on the right, thus being intermediate in colour between the two sexes. — Dr. W. C. Ondaatje exhibited a collection of 30 species of Ceylon Corals, of which 20 were of a stony character. The series agree in the main with those of the Indian fauna; four are new species, viz. 2 of *Coeloria*, 1 of *Pavonia*, and 1 of *Alcyonium*, the two latter however showing most affinity to forms met with in islands of the Pacific Ocean. — A paper was read »On the Manna« or Lerp Insect of South Australia by J. G. Otto Tepper. This contains Observations on the insect in question, and on the peculiar saccharine substance derived from it and deposited on various species of Eucalypt trees.

1st March, 1883. — Mr. Alf. W. Bennett read a paper »On the Constancy of Insects in their Visits to Flowers«. He stated as a summary that the different classes of Insects show very great difference in this respect. Butterflies show but little constancy except in a few instances; but they would appear to be guided to a certain extent by a preference for particular colours. The diptera exhibit greater constancy, though by no means ab-

solute. A much greater degree of constancy is manifested by the Apidae; and this, becomes all but absolute in the hive-bee. It is an interesting circumstance that this constancy appears to increase in proportion to the part performed by the insects in carrying pollen from flower to flower. A much larger number of observations is however needed in order to determine with certainty any general law; and especially a careful microscopic examination of the pollen attached to the proboscis, mandibles, legs, and under side of the abdomen and thorax. As respects preference for particular colours, the Lepidoptera observed paid 70 visits to red or pink flowers, 5 to blue, 15 to yellow, 5 to white; the Diptera 9 to red or pink, 8 to yellow, 20 to white; the Hymenoptera 303 to red or pink, 126 to blue, 11 to yellow, 17 to white. — There followed a communication »On the Methodic Habits of Insects when visiting Flowers« by Mr. R. M. Christy. The author records in detail the movements of 76 insects whilst engaged in visiting 2400 flowers. He tabulates the results and concludes that insects do posses a decided preference for a number of successive visits to the same species of flower although this is not invariably the case. Most of the observations were made on Bees which seem to perform the fertilization of at least one half of all the flowers fertilized by insects in this country. — Butterflies as a rule seem to wander purposelessly in their flight, nevertheless some species including the Fritillaries are fairly methodic. The author believes that it is not by colour alone that insects are guided from one flower to another of the same species and the sense of smell is suggested. Bees he avers have but poor sight for long distances but good sight for short distances; of 55 Humble Bees watched 26 visited blue flowers; 12 of the Bees were methodic in their visits and 5 not so; 13 visited white flowers, 5 were methodic and 8 not at all; 11 visited yellow flowers of which 5 were methodic and 6 not; 28 visited red flowers, 7 were methodic, 9 nearly so while 12 were not. Mr. Christy inclines to the opinion (though admitting paucity of data) that Bees in a flight from their nest confine their visits exclusively or principally to only one species of plant. — The Secretary Mr. G. J. Romanes read a paper »Observations on Living Echinodermata«. He stated that star-fish possess a sense of smell which is not localized in any particular organs, such as the ocelli, but is distributed over the whole of the ventral surface. The function of the Pedicellariae was shown by some further experiments corroborative of those already published by him in the Philosophical Transactions, to be that of seizing upon and arresting the movements of fronds of sea-weed in order to give the pedicels time to establish their adhesions. It was also shown that the righting movements of Echinus when inverted on its ab-oral pole (which are performed by means of the pedicels) are due to central coordination proceeding in part from the pentagonal nerve ring surrounding the mouth and in part from central nerve-matter distributed along the course of the radial nerve-trunks. One of the experiments whereby the fact of such central coordination (depending on a sense of gravity) was proved, consisted in rotating an inverted Echinus upon a wheel moving in a vertical plane. It was found that whatever phase in the righting manoeuvre the Echinus might have attained at the moment when the rotation commenced was maintained so long as the rotation continued; but the manoeuvre was resumed so soon as the rotation was allowed to cease. The paper concluded with an account of the effects of the various nerve poisons

on the Echinodermata. — There followed in abstract the 17. part of the Rev. R. Boog Watson's Memoir on the Mollusca of the Challenger Expedition — therein he deals with the Family Pyramidellidae, describing 23 new species of the genus *Eulima* and 1 of the genus *Stylifer*. — J. Murie.

IV. Personal-Notizen.

Deutsche Universitäten: 3. Breslau. (Berichtigung.)

1. Assistent am Zoolog. Institut: Aug. Assmann, naturwiss. Zeichner. (Dr. Hans Strasser ist jetzt in Freiburg. s. u.)

4. Erlangen.

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