Names placed in the Official List of Generic Names.—The following names are hereby placed in the Official List of Generic Names: *Trematoda: Dicrocoelium, Fasciola, Gastrodiscus, Heterophyes. Cestoda: Davainea, Dipylidium, Echinococcus, Taenia. Acanthocephala: Gigantorhynchus.*

Opinion 85. Ninety-eight Generic Names in Crustacea placed in the Official List of Generic Names.—The following names are hereby placed in the Official List of Generic Names: *Crustacea: Acmaeopleura, Asthenognathus, Bathyplax, Camptandrium, Camptoplax, Catoptrus, Ceratoplax, Chasmagnathus, Chasmocarcinus, Clistocoeloma, Cyrtograpsus, Dissodactylus, Durckheimia, Epixanthus, Euchirograpsus, Eucrate, Eucratodes, Eucratopsis, Euryetisus, Euryplax, Eurytium, Fabia, Galene, Geryon, Glyptograpsus, Glyptoplax, Gomeza, Goneplax, Halimede, Helice, Hephthopelta, Hexapus, Holometopus, Holothuriophilus, Homalaspis, Lachnopodus, Leptodius, Liagore, Libystes, Liomera, Lipaesthesius, Litocheira, Lophopanopeus, Lophopilumnus, Lybia, Melybia, Metasesarma, Metopocarcinus, Micropanope, Notonyx, Oediplax, Ommatocarcinus, Opisthopus, Orphnoxanthus, Panoplax, Paragalene, Parapanope, Parapleurophrycoides, Paraxanthus, Perenon, Perigrapsus, Pilumnoides, Pilumnus, Pinnaxodes, Pinnixa, Pinnotherelia, Pinnotheres, Planes, Platychirograpsus, Platypilumnus, Platyxanthus, Polydectus, Prionoplax, Pseudocarcinus, Pseudopinnixa, Pseudorhombila, Psopheticus, Ptychognathus, Pyxidognathus, Rhithropanopeus, Rhizopa, Ruppellioides, Sarmatium, Scalopidia, Scleroplax, Speocarcinus, Sphaerozius, Tetraxanthus, Tetrias, Thaumastoplax, Utica, Varuna, Xanthasia, Xanthodius, Xenophthalmodes, Xenophthalmus, Zosimus, Zozymodes.*

Opinion 86. *Conulinus* von Martens, 1895.—The generic name *Conulinus* von Martens, 1895, takes as type *Buliminus (Conulinus) conulus* Rv., and is not necessarily invalidated by *Conulina* Bronn.

Opinion 87. The Status of Proof-Sheets in Nomenclature.—Printer's proof-sheets do not constitute publication and, therefore, have no status under the International Rules of Zoological Nomenclature.

Opinion 88. *Otarion diffractum* vs. *Cyphaspis burmeisteri.*—The name of a species is not disqualified merely because the author included in his conception bodily parts of more than one species. The name of a genus based on such a species is therefore available. *Otarion diffractum* Zenker is valid. *Otarion* is to be preferred to *Cyphaspis,* and *C. burmeisteri* Barr. is a synonym of *O. diffractum.*

Opinion 89. Suspension of the Rules in the Case of Gronow 1763, Commerson 1803, Gesellschaft Schauplatz 1775 to 1781, Catesby 1771, Browne 1789, Valmont de Bomare 1768 to 1775.—Under suspension of the rules, in any case where such suspension may be considered necessary according to the interpretation now or hereafter adopted by the Commission, the following works or papers are declared eliminated from consideration as respects their systematic names as of their respective dates: Gronow 1763, Commerson 1803, Gesellschaft Schauplatz 1775 to 1781, Catesby 1771, Browne 1789, Valmont de Bomare 1768 to 1775.

Opinion 90. Report on Sixteen Generic Names of Mammals for Which Suspension of Rules was Requested.—None of the sixteen names receives a unanimous vote for suspension; accordingly, the Commission is not emnames (namely: *Cercopithecus, Gazella, Hippotragus, Lagidium, Nycteris,* and *Manatus*) receive two thirds majority or more for suspension, and are, therefore, to be referred for final decision to a special committee of three to be appointed by the president of the section on nomenclature of the next international congress. Ten names (namely: *Echidna, Anthropopithecus, Coelogenys, Chiromys, Dasypus, Dicotyles, Galeopithecus, Hapale, Rhytina* and *Simia*) fail to receive a two thirds majority vote for suspension, and therefore the Law of Priority is to be applied in these cases.

C. W. STILES, *Secretary.*

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A BLACK COLLODION COATING FOR ATMOMETER SPHERES

MANY of those engaged in the study of the influence of evaporation upon plants, insects, and so forth, have need for black atmometer spheres, used in conjunction with similar white spheres for indicating the possible influence of solar radiation upon rates of water loss. A supply of satisfactory black spheres has not yet been secured, although ceramic experiments are in progress toward that end. It is therefore still necessary to employ superficially blackened spheres. A method for blackening white spheres with washed lampblack has been described (SCIENCE 58: 182–183, September, 1923), but spheres blackened in this way require to be reblackened after each rain and after each cleaning. Another and recently developed method for superficially blackening white spheres is to lay over the spherical surface a thin collodion film bearing lampblack. The collodion-coated spheres have proved very satisfactory. Their preparation is described below.

Collodion solution (Merk's "Reagent" or "U. S. P., No. 9") is employed, with sufficient lampblack mixed into it to produce a thoroughly opaque, black film when the sphere is dipped in the liquid. It is well to moisten the lampblack first with a little alcohol, to make a paste, which can then be easily and uniformly dispersed throughout the collodion solution. There should be no air bubbles in the mixture, which needs finally to be thinned by addition of ether.

Regular white atmometer spheres with their necks waterproofed are dipped in the black liquid, so as to coat thoroughly the whole spherical surface, care being taken to avoid air bubbles that might lie between the porcelain and the coating. Upon lifting

the sphere from the liquid, the excess of the latter is allowed to drop off, after which the sphere, held by the cylindrical neck, is swung to and fro through the air, being rotated by wrist movement and turned in such a manner as to distribute the collodion as equally as possible over the surface. This treatment rapidly removes some of the alcohol-ether solvent and the black membrane gels. But drying must not go too far. As soon as the membrane has hardened slightly, the sphere is dipped again and the process is repeated. Generally three dippings are found to be best. Some experimentation is requisite to secure the right dilution of the liquid and the right manipulation. After the last treatment and before drying proceeds too far, the blackened sphere is placed under distilled water, to be kept so till it is to be mounted for use.

Collodion-coated spheres may be preserved under water and may be shipped from place to place in sealed pint "Mason" jars, a wrapping of wet filter paper being first applied, to prevent the membrane from coming into contact with the glass wall of the jar. If several layers of wet filter paper are used the jar need not be completely filled with water, but it is generally best to have it full, the sphere cavity being also filled.

The water-impregnated collodion-lampblack membrane will bear a surprising amount of rubbing and it may be cleaned from time to time in the operation of the instrument, by sponging with distilled water and an absorbent-cotton or soft-cloth swab. The membrane is not apt to be injured in ordinary handling. It should never be allowed to dry, for the gel alters on losing its imbibed water and the process is practically irreversible.

The coefficient of correction for a collodion-coated sphere may be slightly different from that for the same sphere before being coated. A blackened and a standardized white sphere placed side by side, in the open preferably and equally exposed to air currents, are read for a night period to secure information as to the coefficient of the blackened one. Both instruments are set after dark in the evening and they are read before sunrise the following morning. The loss from the white sphere is multiplied by its regular coefficient (as hundredths) and the product thus secured is divided by the corresponding loss from the blackened sphere. The quotient is the coefficient of the latter, by which its readings are to be multiplied.

It is doubtless true that the collodion film considerably diminishes the capacity of the sphere wall to transmit water from the supply within to the external evaporation surface, and it naturally follows that evaporation and sunshine conditions may at times be encountered so intense as to surpass the capacity of the coated instrument. But the conducting capacity of the collodion membrane (which should not be unnecessarily thick) appears to be ample for all evaporation and solar-radiation intensities apt to be encountered, excepting perhaps in the most arid climates. This possible difficulty has not yet been experienced, however. The collodion-coated spheres may of course be tested by comparison with similar spheres blackened with washed lampblack by the water method. The latter have proved suitable for the driest hours in the most arid regions. The two forms absorb radiation about equally.

The method here described provides black spherical atmometers that do not lose their coatings when exposed to rain. They can be easily kept clean by occasional wiping with distilled water and a soft swab. With collodion-coated spheres no mercury valve is necessary to prevent absorption of rain and dew. Neither of these desirable features is possessed by spheres blackened with lampblack and water.

Since mistakes may occur, we may add that a general summation of the evaporation conditions is secured from the white instrument alone, which absorbs but little radiation, and that the difference between corresponding corrected losses from the white sphere and from the black is an indication of the radiation influence. Total sunshine intensity, integrated throughout the period of observation, is nearly proportional to the difference just mentioned, as far as the influence of solar intensity upon evaporation from this sort of instrument is concerned. The combination of a blackened and a white sphere operated side by side and thus constituting a radio-atmometer is the most satisfactory means thus far available for measuring the total intensity of sunshine in ecological and physiological studies.

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A NEW SPIRAL GAS-WASHING BOTTLE

A NEW spiral gas-washing bottle has been designed in order to meet severe requirements. The new bottle gives excellent contact for a long time between the gas and a definite volume of liquid so that there is good opportunity for complete absorption or saturation of the liquid with gas; the liquid is thoroughly circulated so that all of it is brought into contact with the gas; there are no dead spaces to trap any of the gas.

The bottle consists of four parts, which are rugged and can easily be taken apart for cleaning: an outer