

the recognized rules of priority. When for any group such diagnoses of the different subdivisions shall have been published, and, after discussion, so modified as to be acceptable to the majority of students of the group, forms subsequently described should be accompanied by similar diagnoses and similar designations of a type which will render them strictly comparable to forms already known.

The Hydracarina form a sharply limited and very homogeneous group in which the application of such a scheme as proposed above seems practicable. Accordingly, it is suggested here, and in the complete paper it is expected that there will be given for each family and genus: first, the name having priority; second the author of the same, together with the date and exact reference; third, a diagnosis in Latin and English; fourth, the type, with reference to the author and exact date, together with the reasons for selection of the same.

*Southeastern United States as a Center of Geographical Distribution of Fauna and Flora:* CHARLES C. ADAMS. (Read by title only.)

In general the geographical relationship of the fauna and flora of the northern United States, east of the Great Plains, is with that of the Southeast, and points to an origin in that direction, except in the case of the distinctly boreal forms. The abundance and diversity of life in the Southeast indicate that it has been, and now is, a center of dispersal. The relicts indicate that it has been a center of preservation of ancient types, and the endemism shows that it has been a center of origin of types. There are two distinct southern centers of dispersal in temperate United States, one in the moist Southeast and the other in the arid Southwest. Nine criteria, aside from fossil evidence, are recognized for determining the

center of origin or the locality of dispersal: (1) Location of the greatest differentiation of a type; (2) location of dominance or great abundance of individuals; (3) location of synthetic or closely related forms; (4) location of maximum size of individuals; (5) location of greatest productiveness and its stability, in crops; (6) continuity and convergence of lines of dispersal; (7) location of least dependence upon a restricted habitat; (8) continuity and directness of individual variations or modifications radiating from the center of origin along the highways of dispersal; (9) direction indicated by biogeographical affinities and (10) annual migration routes in birds. There are three primary outlets of dispersal from the Southeast: (1) The Mississippi Valley and its tributaries; (2) the Coastal Plain, and (3) the Appalachian Mountains and adjacent plateaus. The first two have also functioned for tropical types and the third for boreal forms. Dispersal is both forward and backward along these highways. It is desirable to study individual variation of animals and plants along their lines of dispersal and divergence from the center of origin, in such characters as size, productiveness, continuity of variation, color variation, and changes of habit and habitats. Life areas should be studied as centers of dispersal and origin and hence dynamically and genetically.

*Description of Cephalogonimus vesicaudus, sp. nov.:* W. S. NICKERSON. (Read by title only.)

*Fresh Water Polychæta:* H. P. JOHNSON.

*The Lateral Line System of Polyodon spathula:* HENRY F. NACHTRIEB.

The paper considered only the general anatomical features of the lateral line of *Polyodon*. In general the systems of the