the same species as the Greenland specimens called *Ophioglossum granulatum*. This is another illustration of the great caution necessary in using the determinations of impressions or casts as the basis of conclusions in reference to the history of a group.—J. M. C.

**Classification of plants.**—Professor Bessey has issued a second edition of his *Outlines of plant phyla*, the first having been noted in *Bot. Gaz.* **51**:317. 1911, where it was stated that plants were grouped into 14 coordinate phyla, and their names were given. The present edition contains an interesting census, the enumeration of species, in terms of the four conventional groups, being as follows: thallophytes 79,450 (64,000 of which are fungi); bryophytes 16,000; pteridophytes 4524; spermatophytes 133,040 (only 540 of which are gymnosperms). The total is 233,614 species, distributed among 648 families.—J. M. C.

**Vestigial axillary strands of Trichomanes.**—It has been known for some time that vestigial axillary strands occur among the Hymenophyllaceae, in addition to the general occurrence of axillary branches. Miss Chambers has examined material of *Trichomanes javanicum* from the Fiji Islands and finds the axillary vestige ending in a conical mass of parenchyma, which suggests the last vestige of an axillary bud. The important fact is that comparable situations in *Helminthostachys* and the Botryopterideae suggest that Botryopterideae, Ophioglossaceae, and Hymenophyllaceae "are in one circle of affinity."—J. M. C.

**Discomycetes of Iowa.**—Seaver has brought together in very attractive form the available information in reference to the discomycetous flora of Iowa. It is intended mainly as a guide to local students, and therefore is in manual form, with keys and full descriptions. There are presented 126 species and 56 genera. This average of approximately two species to a genus, 23 of the genera being represented by a single species and the largest one by only 11, indicates that the generic boundaries in the group are rather closely drawn about the species.—J. M. C.

**Seeds of Bennettitales.**—Wieland has sectioned an unusually well preserved specimen of *Cycadeoidea* obtained recently from the Black Hills region (near Hermosa), and makes it the occasion for bringing the seed

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53 Bessey, Charles E., Outlines of plant phyla. 2d ed. pp. 20. Private publication. 1911.

