on 'Botanical Nomenclature' in your issue of May 9 (p. 749), and am gratified, of course, by his approval of the suggestion that the disposition of objectionable names or caconyms be separated from the body of nomenclatorial legislation and left to a permanent committee or academy. On the other hand, I greatly regret my failure to have made sufficently plain the fundamental importance of generic types as necessary to stability in the nomenclature of genera.* Had this principle been adequately presented Dr. Dall would have realized that it is not provided for in any existing legislation, botanical or zoological. The most serious deficiency of botanical nomenclature is therefore not avoidable by 'rules accepted by practically all zoologists,' among whom there is in this respect quite as much diversity of faith and practice as with botanists.

In the formulation of rules upon some of the less important details the zoologists may have made better progress than their botanical brethren, but the illustrations cited by Dr. Dall seem rather unfortunately chosen. Vernacular names, for example, are rejected by all codes, that is, when they occur in non-scientific writings, but both botanists and zoologists from the pre-Linnæans to the present generation have exercised the privilege of adopting such names into scientific literature, often in large numbers. Whether a name is 'vernacular' or 'scientific' has thus been allowed to depend upon the nature of the publication rather than upon the origin of the term, so that unless a new canon of criticism can be formulated the nomenclatorial atrocities of Hernandez cannot be excluded because of their barbarian origin without disturbing hundreds of commonly accepted designations of both plants and animals.

Dr. Dall declares that 'ninety-nine hundredths' of our remaining tribulations would disappear by the use of Linnæus' 'Systema Naturæ,' Ed. X., as the starting point of nomenclature, but unless it be the advantage of following the zoologists he gives no intimation of any reason why 1759 is a better date than 1753. As a matter of fact, the plants were presented under the binomial system of nomenclature five years before the animals, and Linnæus but carried out with the animals in 1758 what he had accomplished with the plants in 1753. Botany had a far larger popularity and a much greater and more rapid development than zoology in the seventeenth and eighteenth centuries, which may explain the stronger attachment to mediæval traditions and the greater difficulties of botanical reforms, but this more persistent conservatism will be beneficial if it compels us to master the complex problems of taxonomy and prevents too ready assent to such partial and inadequate readjustments as have found favor among some zoologists.

The historical development and dominant traditions of the two sciences have been somewhat different, but nobody will seriously maintain that there is any essential divergence between the taxonomic requirements of botany and those of zoology, and an adequate solution discovered in the one science will not be lightly neglected in the other. The so-called Paris or DeCandollean code of 1867, to which Dr. Dall also advises botanists to hark back, was not copyrighted, and yet the zoologists did not adopt it, doubtless because they thought themselves able to do better. Like the supplementary Rochester code, it was an important step in the right direction, but it did not exhaust the possibilities of progress. It was evidently prepared as an advisory or preliminary document, and is quite lacking in the logical arrangement and definite statement requisite in nomenclatorial legislation. Moreover, it was based on pre-evolutionary conceptions of nature, and as a system of recording the results of biological study it does not meet our present necessities.

O. F. COOK.

WASHINGTON, June 10, 1902.

* SCIENCE, N. S. XV.: 646; references to previous discussions of the same subject are given on page 656.

COILED BASKETRY.

PROFESSOR MASON'S note under the above heading in SCIENCE for May 30 is another reminder that we know but little of the arts of our eastern Indians at the period of their

first intercourse with Europeans. That there is little evidence of the use of coiled basketry among them at that time is not surprising, for the early writers were not technologists and were satisfied with recording incidentally the most meager facts concerning the arts and customs of the natives with whom they came in contact.

Basketry of any kind is rarely found in graves or its impressions upon pottery east of the Rocky Mountains. The burial caves have, however, furnished a very few examples of the widely distributed twined weaving, but so far as I know, no examples of the coiled pattern. We must look therefore to existing tribes for the principal evidences of the occurrence in ancient times of different types of this branch of textile art.

The isolated examples of coiled basketry occurring east of the Rocky Mountains noted by Professor Mason may be supplemented by a number of specimens in the Peabody Museum at Cambridge obtained twenty-seven years ago from the Ojibwa Indians of Lake Superior. The coils are of sweet grass and are about one-fourth of an inch in diameter. They are joined with common sewing thread, the stitches being continued from the edge towards the center of the basket, and not following the coils as is usual, the mode of construction having somewhat degenerated.

I see no good reason for attributing this form of basketry among the Ojibwa to European influence. The Algonquians in early historic days were expert basket makers. The excellence and variety of the old basket work of the New England Indians for example is represented to-day only by the degenerate splint basketry which is not worthy of a place upon the shelves of a museum.

There is not to my knowledge a single example of woven basketry extant from New England that may be considered typical of any one of the many primitive types from these states referred to in the early records. Gookin, writing in 1674, tells us of "several sorts of baskets, great and small; some will hold four bushels or more, and so downward to a pint. * * * Some of these baskets are made of rushes: some of bents [coarse grass], others of maize husks, others of a kind of silk grass; others of a kind of wild hemp; and some of the barks of trees, many of these very neat and artificial, with the portraitures of birds, beasts, fishes and flowers upon them in colors." The soldiers under Capt. Underhill, after destroying the Pequot fort in Connecticut, in 1637, brought back with them 'several delightful baskets.' Brereton (1602) found baskets of twigs 'not unlike our osier.' Champlain saw corn stored in 'large grass sacks.' Josselyn writes of 'baskets, bags and mats woven with sparke, bark of the lime tree and rushes of several kinds dyed as before, some black, blue, red, yellow.' In 1620 the Pilgrims found in a cache at Cape Cod a 'great new basket,' round and narrow at the top, and containing three or four bushels of shelled corn, with thirty-six goodly ears unshelled. The New England Indians were probably not more expert basket makers than other tribes to the west and south.

Does not the fact that the three distinct forms of weaving, twined, checker and coiled, are still found among the Ojibwas seem to indicate a survival of these types from prehistoric times?

Charles C. Willoughby.
Peabody Museum.

Iridescent Clouds.

To the Editor of Science: Iridescent clouds are such comparatively rare phenomena that notes on individual occurrences of them are not superfluous. On June 11, I had an opportunity to see some wonderfully fine examples of these interesting clouds. It was a fine summer day; the sky a deep blue, with scattered cirro-stratus patches drifting across it from west to east, and the wind SW. About 11.30 A.M. a small detached cirro-stratus cloud, roughly oblong in shape, and at that time about 15° to 20° from the sun, attracted my attention because of its dazzling whiteness, quite unlike the appearance of ordinary clouds. Very soon colors began to appear, and at the end of about five minutes there were developed some faint bands of color, a faint pinkish tint being uppermost; then a yellowish-green, and then below that a delicate bluish green. These bands were roughly parallel with the