named another *X. kirbyi,* but this is a homonym, as the rules are generally understood. Hampson calls Holland's species *X. cirbyi,* and it is imaginable that this might be interpreted as the necessary new name for the insect. Since, however, it is only intended as a new way of writing the old name, it seems that Holland's insect should be renamed, say, *X. hollandi.*

Enough has been said to show that the proposed abandonment of k and w, if it is not to prevail, should be checked as soon as possible; or if it is to be the rule, should be widely known, so that proposers of new names may guide themselves accordingly. Personally, I am totally opposed to it, on the ground that names are merely symbols designating particular objects, and the most we can ask is that they have a Latinoid ending, and are not too long. Nevertheless, the matter is at present an open one, and if most zoologists prefer to follow Hampson and Elliot, the minority will probably give in to their wishes, for the sake of uniformity. On the other hand, if nearly all are against the proposal, it would seem that a few should not persist in making such changes as those cited, unless they can convince themselves that a very important matter of principle is involved.

If the editor will allow it, I will herewith ask all working zoologists who are willing to take the trouble to send me a post-card voting for or against the substitution of c and v for k and w, and I will list the names and send them for publication in SCIENCE. I think that the names should be published, for several rather obvious reasons, not the mere numbers pro and con.

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'HAMMOCK,' 'HOMMOCK' OR 'HUMMOCK'?

SOME recent botanical papers seem to indicate that there is still some uncertainty as to which of the above is the proper designation for a certain class of geographical features of frequent occurrence in some parts of the southeastern United States. These three words may represent three totally different and independent ideas, but they are so similar in spelling that one may be easily transformed into another by a mere typographical error. But typographical errors will not account for all cases, and there are certain other circumstances which complicate the problem. Having given the matter considerable study lately, both in field and library, I can present some observations which should clear up most of the existing confusion.

The lexicographers all seem to favor 'hummock.' Webster, for instance, says: "Hummock (probably an Indian word). (1) A rounded knoll or hillock; * * * (2) A ridge or pile of ice * * *. See Hommock. (3) Timbered land. (Florida.)" Under 'hommock' is the following definition: "Hommock (written also hammock and hummock). (Probably an Indian word.) A hillock, or small eminence of a conical form, sometimes covered with trees. *Bartram.*" The definitions in the Century and Standard dictionaries are somewhat longer, but do not differ materially from that of Webster, except that they say that hummock is probably a diminutive of hump. In all three, Bartram is the only authority cited for 'hommock'; and this word occurs on pages 31, 219–221, and perhaps elsewhere in the 1794 edition of his 'Travels.' The same spelling is used throughout Dr. E. W. Hilgard's 'Report on the Geology and Agriculture of Mississippi,' published in 1860, and in that work several varieties of 'hommocks' are fully described. Dr. Hilgrade in a recent letter informs me that that spelling was in accordance with the pronunciation used by the natives, but that he now believes 'hammock' to be correct, and writes it that way.

The published references to 'hammock' and 'hummock' are so numerous that it would be impracticable to attempt to list them; but thus far I have noted the former in at least thirty different books and papers, the earliest dating back to 1839, and the latter in about half as many, beginning with 1834. Most of the occurrences of both forms are in works dealing with Florida, and a careful search through Florida literature would doubtless reveal many other cases of each. It is

very significant in this connection that most of the writers who use 'hammock' have spent much more time in the regions they describe than have those who use 'hummock'; also that some who preferred the latter have expressly stated that the natives always pronounced it 'hammock,' and yet their faith in the dictionaries seems to have been too firm to be shaken by this indisputable evidence. In some cases it is almost certain that 'hummock' was put in by the editor or printer, without the sanction of the author,[1] though I have indeed noticed one or two cases where the same may be said of 'hammock.'

As far as my experience in the field goes, the natives in Georgia invariably say 'hammock.' I have heard this word in the counties of Chatham, Coffee, Lowndes, Pulaski, Tattnall and Wilcox, and it is doubtless used throughout the intervening ones. If any further evidence were needed, a good map will show a Gulf Hammock (also a post-office of that name) and a Hammock Creek in Florida, and a Hammock Island in Georgia. I have never yet seen 'hummock' on a map though, nor found any evidence that it is ever used in conversation anywhere (in the sense here indicated). As usage fixes the language, it follows that 'hammock' is the correct form.

Now as for the definition of this word. It is used for quite a variety of conditions, but from all the evidence obtainable it may be defined broadly as a limited area, with comparatively dry soil (at least never inundated, and thus distinguished from a swamp), containing a large proportion of trees other than pines, and located in a region where 'prairies,' marshes or open pine forests predominate. Topographically a hammock may be either a slight elevation, or a depression, or a slope, and its soil may be sandy, clayey or rocky. The soil is usually rather rich, and the trees growing in it are usually mostly evergreens—though there is probably no one tree which characterizes all hammocks—and they usually grow so close together as to shade the ground and allow the formation of humus, which is almost wanting in adjacent areas.

A few varieties of hammocks may be briefly mentioned. On the coast of South Carolina and Georgia, at least in the vicinity of Savannah, a hammock is a low sandy island in a salt marsh, conspicuous for its dense growth of evergreen woody plants; and in the Everglades of Florida, according to the accounts of several different explorers, it is a sort of rocky oasis, elevated a few inches above the adjacent prairies, and densely wooded. For these two kinds of places the term 'hummock' (diminutive of hump) would not be altogether inappropriate, and this fact doubtless accounts for some of the confusion above mentioned. But in central Florida, by all accounts, it seems that a hammock is usually a depression; while in the interior of the coastal plain of Georgia it is nearly always a sandy slope forming an intermediate zone between the river or creek swamps and the sand-hills which border them.

The published references to the subject show hammocks to range from North Carolina to Florida and Mississippi,[2] and, like many other interesting things, they seem to be strictly confined to the coastal plain. The natives of other parts of the country seem to have no knowledge of such a word, and as no lexicographers, and few writers of any kind, live in the regions where hammocks occur, it is not surprising that this word should be incorrectly treated in all dictionaries.

As for the etymology of 'hammock' (in this geographical sense) I have no suggestions to offer, other than that given by Webster for 'hommock' and 'hummock.' As a hammock as here defined is always characterized by its vegetation rather than by its topography, it can hardly have anything to do with 'hum-

[1] A case of this kind has occurred in the columns of SCIENCE since the above lines were written and sent to the editor. In the issue of June 16, in the report of a paper I read before the Torrey Botanical Club in April, I am made to say 'hummocks' instead of 'hammocks.'

[2] In a paper published by Dr. Arthur Hollick about twenty-five years ago (*Bull. Torr. Bot. Club*, 7: 14, 1880) there is a reference to a 'hammock of soapstone and iron ore' on Staten Island, which looks like a surprising extension of range; but Dr. Hollick tells me that 'hummock' is what he intended to say.

mock,' if that is a diminutive of hump, as seems most likely. Whether there is any connection between our hammock and 'hammock' in the ordinary sense (German *Hangematte*) perhaps some philologist can tell us. If 'hommock' could be universally adopted by the natives of the southeastern coastal plain, then 'hammock' could be restricted to the familiar manufactured article and 'hummock' to a heap of ice or something of that sort; but this is obviously out of the question at present.

Before dismissing the subject I should like to suggest to those botanists who believe in giving names of classical derivation to every kind of plant-habitat, that they find a Latin or Greek equivalent for the word under discussion, and thus do away with all this uncertainty at one stroke, at least as far as botanists are concerned.

Roland M. Harper.

College Point, New York,
June, 1905.

INDIAN BONE COMBS.

To the Editor of Science: Some of your readers may receive the valuable archeological reports of David Boyle, of Toronto, annually made to the minister of education, Ontario. Mr. Boyle fully believes that the bone combs found on Indian sites in Canada and New York are a purely aboriginal idea, while I as firmly hold that this idea came from Europeans. Such differences are common and natural, but the report for 1904 mistakes my position saying:

> The contention of Dr. Beauchamp is simply this, that without metallic tools it was impossible to make a comb, and the inference is that before the appearance of Europeans, the Indians had no use for any article of this kind.

The latter statement is correct, the former an error of my valued friend. If I have made such a statement I gladly retract it. I certainly do not believe this impossible in a general way, but metallic tools were used in most cases.

I have figures of forty-five of these combs from Iroquois sites in New York and they are found there on no others as yet. Ten of these are from Mohawk sites, found with glass and brass ornaments, and there are others there. Four are from Cayuga sites of similar character. Onondaga sites have furnished seven, of which two are as early as 1600. Seneca sites have furnished twenty, mostly made about 1687, with two more which are in a sense prehistoric. Some recent ones have not been figured. From Oneida sites I remember none, though they should occur there. Two others were from Jefferson County, where they are certainly rare. One of these may be classed as early and the other recent. Some brass beads found on sites there now place these in the sixteenth century, as had been surmised. Of those enumerated forty were found with European articles, and five may be dated anywhere from 1550 to 1600. The earlier and ruder ones were made with stone tools; the more elaborate with metallic implements. The soundness of my position will thus be seen. All known New York combs of this character seem to have been made between 1550 and 1700, and may be ascribed to European contact. A few were made with stone tools, soon replaced with those of metal, and I certainly do not think it was impossible to have made the ruder forms without the later tools. Why the Indians did not think of these combs before we can not tell. It is evident they did not till after European contact.

Some of the later combs are fine in design, and Mr. Boyle has given some figures of Egyptian bone combs, furnished by Wm. Flinders Petrie, and there are curious resemblances to those found in New York and Canada, so many centuries later. One great value of Mr. Boyle's reports to those laboring in New York is in the close relations of the fields, so well shown in his long and accurate work.

W. M. Beauchamp.

Syracuse, N. Y.,
August 11, 1905.

SPECIAL ARTICLES.

THE SYSTEMATIC NAME OF THE JAPANESE DEER.

That an author himself has no more right to change a systematic name once given by him than any other person is a principle now