

Some of the big wolves and some of the coyotes which Dr. Merriam describes may be entitled to specific rank, but, if he bases separate species upon characters no more important than those he sometimes employs, I firmly believe that he will find that with every new locality which his collectors visit he will get new 'species,' until he has a snarl of forty or fifty for North America alone; and when we have reached such a point we had much better rearrange our terminology, if we intend to keep the binomial system at all, and treat as a genus what we have been used to consider as a species. It would be more convenient and less cumbersome, and it would be no more misleading.

Dr. Merriam states that the coyotes do not essentially resemble each other, or essentially differ from the wolves. It seems to me, however, that he does, himself, admit their essential difference from the wolves by the fact that he treats them all together even when he splits them up into three supra-specific groups and eight to eleven species. He goes on to say that there is an enormous gap between the large northern coyote and the small southern coyote of the Rio Grande, and another great gap between the big gray wolf of the north and the big red wolf of the south, while the northern coyote and the southern wolf approach one another. Now I happen to have hunted over the habitats of the four animals in question. I have shot and poisoned them and hunted them with dogs and noticed their ways of life. In each case the animal decreases greatly in size, according to its habitat, so that in each case we have a pair of wolves, one big and one small, which, as they go south, keep relatively as far apart as ever, the one from the other. At any part of their habitat they remain entirely distinct; but as they grow smaller toward the south a point is, of course, reached when the southern representative of the big wolf begins to approach the northern representative of the small wolf. In voice and habits the differences remain the same. As they grow smaller they, of course, grow less formidable. The northern wolf will hamstring a horse, the southern carry off a sheep; the northern coyote will tackle a sheep, when the southern will only rob a hen-roost. In each place the two

animals have two different voices, and, as far as I could tell, the voices were not much changed from north to south. Now, it seems to me that in using a term of convenience, which is all that the term 'species' is, it is more convenient and essentially more true to speak of this pair of varying animals as wolf and coyote rather than by a score of different names which serve to indicate a score of different sets of rather minute characteristics.

Once again let me point out that I have no quarrel with Dr. Merriam's facts, but only with the names by which he thinks these facts can best be expressed and emphasized. Wolves and coyotes, grizzly bears and black bears, split up into all kinds of forms, and I well know how difficult it will be and how much time and study will be needed, to group all these various forms naturally and properly into two or three more species. Only a man of Dr. Merriam's remarkable knowledge and attainments and ability can ever make such groupings. But I think he will do his work, if not in better shape, at least in a manner which will make it more readily understood by outsiders, if he proceeds on the theory that he is going to try to establish different species only when there are real fundamental differences, instead of cumbering up the books with hundreds of specific titles which will always be meaningless to any but a limited number of technical experts, and which, even to them, will often serve chiefly to obscure the relationships of the different animals by over-emphasis on minute points of variation. It is not a good thing to let the houses obscure the city.

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GLACIAL MAN IN OHIO.

I HAVE read 'Human Relics in the Drift of Ohio' and Dr. Brinton's criticism of the same in SCIENCE of February 12th.

The gist of Professor Claypole's paper is based upon the discovery of a polished stone axe, made by a well-digger in Ohio ten years before.

Not with especial reference to this discovery, but *apropos* of the danger of accepting any statement at second hand even from the most veracious person (for we are all liable to error), I would like to cite two personal experiences

which occurred during my mound-work in Florida.

At one time I had almost completed the slicing-down of a large mound in which no object in any way connected with Europeans had been found.

While my back happened to be turned I heard a cry and went to the colored digger from whom it came and who, I found, held in his hand an iron spike—a sure sign of European contact.

“From where did this come?” I asked.

The digger did not seem to comprehend my question and, as time pressed, I asked a leading question, which no investigator should do. I inquired again, “Did it come from the base?”

“Yes, sah, from de base,” replied the digger.

I was somewhat nonplussed, for I never had (and never have) dug down a mound of any size where artifacts of white origin were present other than superficially.

Suddenly an idea struck me. “Where is the base?” I asked.

“Why, at de top, sah,” replied the digger.

Once in conversation with a very intelligent man, the leading citizen of a town on the Ocklawaha river, I was somewhat startled at the information that the speaker had in his house a grooved stone axe found on his place.

I pointed out that no report had yet appeared as to the discovery of a grooved axe in Florida. The speaker was positive. He *knew* he was right. I asked him, as a favor, to consult with his family at dinner as to the matter and to let me know later on.

In the afternoon he called on me and stated that the grooved stone axe was a present from a friend in Alabama and that the implement found on his place had no groove.

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THE SMITHSONIAN INSTITUTION AND A NATIONAL UNIVERSITY.*

SINCE our conversation about the organization and purpose of the Smithsonian Institution I have been thinking much about the matter.

* A letter addressed by Professor Benjamin Ide Wheeler, of Cornell University, to the Hon. Gardiner G. Hubbard, Washington, and published here with the permission of Professor Wheeler and Mr. Hubbard.

Certain things seem clear. The Institution is at the National Capital; whatever it does must represent the best there is in the country. The plan of its foundation and the purposes of the founder were broad; it ought, if it can be found in any way practicable, to represent more than one, two or three branches of scientific knowledge. The problem is how, with the limited fund at disposal, to combine the two things, supreme excellence and wide scope.

I think I can conceive of a plan. Whether it is practical or not will be for others who are nearer at hand and better acquainted with the details to determine.

Since the Institution began its work the conditions of scientific work in this country have radically changed. There were then but few recognized departments of scientific endeavor; now the differentiation of the sciences has advanced into great multiplicity. Then a single man was able to cover a large field and there were Humboldts in the land; now a man may not venture to call himself a chemist, but defines his specialty as Physical Chemistry, Agricultural Chemistry, Chemistry of Gases, Inorganic or Organic Chemistry, etc. Then there were no universities in the present sense. There were no institutions where any large number of different scientific fields were occupied by advanced investigators. There were colleges which taught, not universities which learned.

It is now no longer possible for the Smithsonian Institution to compete, even in a single department, with the larger universities. According to its present organization it has, and can have, but one or two men for one or two departments. There are now a half-dozen universities that can and do employ a considerable force of men for each of a large list of scientific departments, each of which is equipped with laboratories, apparatus and collections. A man who permanently establishes himself in residence at Washington at the Institution cuts himself off from many associations he would find at a university. He loses the opportunity of laboratories and carefully assembled collections of the literature of his subject. He loses the stimulus of teaching and of working with investigators and of directing investigations. The Smithsonian Institution is not a university and