CORRESPONDENCE

IDENTIFICATIONS.

(CHARACTERS VS. GEOGRAPHY).

EDITOR OF 'THE AUK';

We are between two horns of a dilemna. On the one hand, *vide* Dr. Dwight, how can we verify a specimen as subspecies "x" unless it carries the distinguishing marks by which "x" is characterized? Subspecific and other similar distributions must be founded upon observed differences in specimens; to reverse the process and identify specimens geographically without regard to characters neither adds to nor verifies existing knowledge and is reasoning in a vicious circle. It can confirm error but never correct it.

On the other hand, as Dr. Grinnell points out, taxonomic relationship descends genetically. An individual is form "y" because it comes of "y" parentage, not because it happens to show certain peculiarities of form or color. Just as distribution maps must be based upon exhibited characters, so genesis is more fundamental than appearance or form which manifestations may at any time be obscured by atavism, mutation or migration. The very fact that a certain subspecies exists in some part of a specific range is indicative that it is a possible variation in that species and suggests a certain tendency in that direction latent in every individual of that specific form. We can therefore expect, every now and then, to find individuals of pure "x" blood resembling, in varying degree, "y" of the same species. To name such a specimen "y" is as logical as calling a Viceroy butterfly a Monarch because it superficially resembles one. On these points, Dr. Grinnell is as sound as Dr. Dwight is on his.

The flaw in Dr. Grinnell's reasoning is however in his advising the geographical identification of aberrant specimens on the assumption that genetic and geographical relationship are synonymous. Dealing with stationary forms of life, such as plants, proximity of station is only strong presumptive evidence of genetic affinity. With mobile birds such probability is tremendously reduced. With Scissor-tailed Flycatchers from Hudson Bay and Black-capped Petrels from the Mississippi Valley it is evident that community of association is only presumptive of community of descent and that geography is an uncertain guide to identification.

Dr. Grinnell pleads for the exercise of "the judgment based upon experience — just as is needed in any other advanced field of knowledge." No one will quarrel with him over the value of this necessary qualification of decision. The only question is where shall it be used? Is not the first duty of the scientific investigator the elimination of the human equation in the statement of fact? In the deductions drawn therefrom full scope

must be allowed for the genius of skilled intuition but a sharp dividing line must always be drawn between ascertained demonstrable facts and hypotheses.

The truth is, we cannot with absolute certainty identify every specimen we study. Why then deceive ourselves and mislead others by making a bluff at doing the impossible? Why not own up honestly and admit that we cannot name such material? We may state that we think it is so and so and where necessary give reasons for the conclusion, but to pass as fact what is only opinion is not the spirit of modern science. The logical solution of the problem is to name subspecifically only such specimens as are humanly demonstrable and use the binomial for the rest. In other words reverse usual practice and instead of using the trinomial regularly and the binomial on occasion use the binomial generally and the trinomial only where necessity or the facts justify its use.

P. A. Taverner.

Museum Geological Survey,
Ottawa, Ont., Dec. 27, 1918.

[While there are some points in favor of Mr. Taverner's plan, which by the way he has put into practice in his article on 'The Birds of the Red Deer River' in this and the preceding numbers of 'The Auk,' there are others which count against it.

First of all we must realize that the practice of duplicating the specific name when referring to the earliest subspecies of a group — i. e. *Melospiza melodia melodia* — is by no means universally adopted, and in very many recent papers and all of those of earlier date the binomial *Melospiza melodia* is used for the first described race and trinomials for the others. Now Mr. Taverner would use this binomial for *some one race* (seen but not positively determined) of *M. melodia*. In the A. O. U. 'Check-List' the same binomial is used to indicate the whole group of subspecies of Song Sparrows collectively. Hence we have three different concepts which we try to denote by one expression. In an index these are hopelessly confused and we are likely to miss valuable information about some form that we are investigating because it is masquerading under some specific name where we would never think of looking for it.

Now as we have in current use a form of name to indicate just what Mr. Taverner has in mind, why not stick to it — i. e. *Melospiza melodia* subsp.? This would avoid all ambiguity. As his practice stands I find it is quite misunderstood, as all of those of whom I inquired, and who had not read Mr. Taverner's published views on the subject, thought that he was simply following Mr. Leverett M. Loomis in abandoning subspecies entirely.

Another difficulty presents itself when we try to follow out Mr. Taverner's plan in the matter of closely related *species*. There are many species that so closely resemble one another that differentiation would be impossible in the field should they happen to occur together. Now Mr. Taverner in

his efforts to avoid every possible mistake refuses to designate the subspecies of the American Magpie because there are European races of the bird which would be indistinguishable from it should they happen to occur here. At the same time he does not hesitate to name the Titlark, *Anthus rubescens*, although he would find it equally difficult to distinguish it from the European *A. spinoletta* — of which indeed Dr. Oberholser considers it a subspecies. So with the Bittern, Solitary Sandpiper, Spotted Sandpiper, etc., etc., which closely resemble species in other parts of the world. Now if it is permissible to "guess" at these *species* why not guess the subspecies also, where we are reasonably certain of them, and use the form I have indicated above in cases where we are on the borderland between races or where winter flocks may contain more than one subspecies?

If we should collect several specimens of a bird that was widely distributed over the region we were exploring it would seem absurd not to infer that all were the same form, and record them as common — though we should really be *absolutely certain* of only the few that had been shot.

As a matter of fact it is possible to make a misidentification in the case of almost any sight record and we also make misidentifications when we have specimens actually in hand, while every reviser of a group has a different opinion as to the disposition of specimens from certain regions. Therefore it should be clear that no system of names will ensure absolute accuracy.

In view of all this why not follow previous custom and make our identifications generic, specific and subspecific where the evidence points with reasonable clearness; using "sp.?" or "subsp?" where there is a real doubt?

Nomenclature is now bearing about all the burdens it will stand and with the excessive multiplication of genera, the establishment of several different kinds of intergradation, the proposed revision in the forms of names according as they are regarded as adjectives or nouns — it is rapidly weakening both in utility and stability, and ere long we may be in danger of a collapse of the whole cumbersome system!— WITMER STONE.]