

Durham; but by the energetic labours of Messrs. Clarke and Roebuck this reproach no longer exists, and this very useful handbook to the vertebrate fauna of the shire will, let us hope, be soon followed by a second volume, dealing with the larger and perhaps more difficult portion of its, to use a handy term, invertebrate animals. The number of British vertebrata not occurring in Yorkshire being comparatively small, it seemed desirable to the compilers to make this work not only a county handbook, but a complete nominal catalogue of the British species. In this we think they have done well, for such a catalogue undoubtedly furnishes a ready means of comparison with the faunas of other districts. The classification and nomenclature has in all cases been based upon the most recent or the most reliable authorities as to the extinct British mammalia. It having been considered advisable to include notices of these, or at least of such of these as had ceased to exist in Yorkshire within historical times, the species are inserted in their correct zoological sequence, but their names are printed in Old English characters, and they are left un-numbered, as not being now entitled to rank as true members of the fauna. The same has been done in the case of the Great Auk among the birds. To the catalogue is prefixed an interesting chapter on the physical aspect of Yorkshire, the largest county of the British Islands, containing an area of 3,936,242 statute acres—one which, while most compact in form, is perhaps the most varied in geological structure, soil, climate, and physical aspect. The introductory remarks also on the mammals, birds, reptiles, amphibians, and fishes are well worth perusal. From the general summary, the richness of the Yorkshire fauna can be at once seen, it including 513 out of the 717 known British vertebrates. We gladly recommend this volume to our readers, as in every way an excellent and scientific handbook to the vertebrate fauna of Yorkshire.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

Schaeberle's Comet

THIS comet, C 1881, was well seen here on the night of Sunday last, the 21st instant. At 9.30, the night being clear, it was at once detected with the naked eye at a point in the north-west, where lines drawn downward through α and β of Ursa Major (the pointers) and γ and δ of the same constellation would intersect, and just above ψ of Ursa Major, a star of the 3rd magnitude. Owing to the comet's close proximity to the horizon I could not use the 6" equatorial, but the position must have been very close upon R.A. 11h. and D.N. 47°. The general appearance to the eye was that of a comet with two nuclei, the one in advance of the other. With a 2½-inch binocular the comet was beautifully sharp and well defined, more so, I thought, than the great southern one when in the same position. The nucleus and star appeared of about the same intensity, but the yellow tint of the latter was strongly contrasted with the almost intense gas blue tint of the former. The tail was well defined, only slightly spreading, and nearly straight, stretching in a line a little to the left of β of Ursa Major, nearly as far as a small triangular group of stars just under β , marked in Maltby's atlas as 44° 37' and 246° 7'. This would give a length of from seven to eight degrees. The tail did not, with the small instrumental power I was using, appear to have any central deficiency of light. The sharpness and brightness of the comet's appearance, as contrasted with the more diffused aspect of the one which has just disappeared, has been remarked upon by several observers.

Guildown, August 22

J. RAND CAPRON

The Descent of Birds

THERE is one passage in the report of Prof. Mivart's lecture on chamæleons (NATURE, vol. xxiv. p. 338) that I cannot allow to pass without demurring to, and that is the suggested probability of a "double origin" for the class Aves. I do not wish at present to raise the issue as to how far the division of all living birds into two groups—"Ratite" and "Carinate"—is, or is not, a natural one; for at present we have not, I think, sufficient information or evidence on the subject to allow of any very definite reply. But any one who is acquainted with the structure of a Tinamu will, I think, be unable to conceive of the many resemblances that group of birds presents to some of the "Ratitæ" as having been developed independently of any genetic connection between the two—and that is what Prof. Mivart's suggestion practically amounts to. That structures so peculiar as feathers—which, as far as we know, are absolutely confined to birds, though universal amongst them—should have been twice over developed, is to me in the highest degree improbable—as improbable, almost, as that the resemblances of the Tunicates and *Amphioxus* to the rest of the Chordata should also be accidental.

W. A. FORBES

West Wickham, Kent

Mr. Wallace and the Organs of Speech

IN his article in NATURE, vol. xxiv. p. 244, Mr. Alfred Wallace has given one of the keys to the formation of speech-language. He says, "When we name the *mouth* or *lips* we use labials; for *tooth* and *tongue*, dentals; for the *nose*, and things relating to it, *nasal* sounds; and this peculiarity is remarkably constant in most languages, civilised and savage." Of this he gives examples from Australasia.

Perhaps it may be said there is not much novelty in Mr. Wallace's observations, as many of us have said the same. I have gone over some of his ground in my small "Comparative Philology" in 1852, but I did not hit the point. Indeed what Mr. Wallace gives us is very little, but when it comes to be applied it acquires the highest importance. We have all known that *nose* is often a nasal, but Mr. Wallace distinctly puts it that *mouth* is a labial, *tooth* a dental, and *nose* a nasal. This however gives us by these words and their connections, as stated by Mr. Wallace, a very poor vocabulary, and leaves most of the phenomena of speech-language unaccounted for, and it gives no explanation apparently of the derivation of speech-language from sign- or gesture-language, and the connection of character with both.

Setting Mr. Wallace's illustrations aside—for though they are true, and taken from his own domain, they are not the most apt—we will search farther afield. Chinese will be convenient. In Chinese, for a reason that need not be explained, *mouth* is not now a labial, but in the series connected with it there are many labials. The series is best illustrated by the characters. The old characters are round; the new characters, as in other classes, are now square, conventionally representing the round. Now *mouth* is a round or circle, ○ (or □). *Ring* is a round or circle ○ (or □). The character for *mouth* is in fact a *ring*, or round, or circle. On looking for other corresponding characters we have *eye* with ○ differentiated. Here we get a labial *mu*. *Face* is another round character, and that is *mien*. *Ear*, *head*, *blood*, *pot* (*ming*), *sun*, *moon*, *woman*, *mother* (*mu*), *white* (a labial), *field* or *garden*, *four* are all differentiated forms of each other and of *mouth*, as we know they ought to be. In cuneiform these characters are round, square, or triangular.

Of many of these psychological relations of words a list or dictionary will be found in the table of equivalents in my "Prehistoric and Protohistoric Comparative Philology." I observed and collected the facts, but did not know the full meaning of them for a long period; and in a paper as yet unpublished by the Biblical Archaeological Society I carried the subject still further, particularly as regards cuneiform and Chinese. Indeed, when Mr. Wallace published his article, I had the facts just cited ready for reference in my hand. The reason I did not grasp the solution was this: I have known for years that words forming what I now call ring characters were related to *eye*, and that *eye* is almost a constant in these investigations, equivalent to a molar in various departments of biological research. Indeed it was by the use of *eye* as a constant that I was able to make those numerous and rapid philological analyses which have excited so much distrust among those unacquainted with the process I used.