guess-work, with no basis in experiment, microscopical study, chemical analysis, or properly observed facts of any sort, as shown by Mr. Keeler's own statements. He is speaking, or supposes he is speaking, of pigment, but his remarks show that he refers to color in a broad sense. Yet no blue pigment has ever been discovered, and green and yellow are well-known to be not by any means always due to pigment, but are merely 'objective structural colors.' Thus, according to Gadow, violet and blue always belong to this category, green almost always, and yellow occasionally. And among the instances he cites where "yellow feathers are in reality without pigment" are such birds as *Icterus* (!), *Xanthomelas*, *Picus*, etc. Green, except in the Musophagidæ, "is always due to yellow, orange, or grayish brown pigment with a special superstructure, which consists either of narrow longitudinal ridges, . . . or else . . . the surface of the rami and radii is smooth and quite transparent, while between it and the pigment exists a layer of small polygonal bodies, similar to those of blue feathers." Further space cannot be given to the subject in this connection, but the reader is advised to carefully study, in connection with Mr. Keeler's "theory of the assortment of pigments," and related parts of his work, the article on 'Colour' by Dr. Hans Gadow in Professor Newton's recently published 'Dictionary of Birds,' from which some of the above statements are quoted.

It is evident that if Mr. Keeler had possessed what may be termed even a fair superficial knowledge of the investigations that have been made respecting pigments, and the structure of feathers in relation to color, he could not have propounded so utterly defenceless a hypothesis as his "Law of the Assortment of Pigments," and would have omitted a great deal of the "rubbish" that he has put into his book on the general subject of the "evolution of colors" in birds.

Many of the minor points in Mr. Keeler's rejoinder are passed over as hardly demanding space for formal consideration, even though the real bearing of my criticisms is in several instances greatly misrepresented.

In conclusion I may add that the task of reviewing Mr. Keeler's book was a painful one, and was prompted only by a sense of duty, not only to the many inexperienced readers who might be misled by it, but as a needed protest against a very prevalent kind of pseudo-science that has of late gained great currency and popularity. That some such antidote was not wholly unnecessary is shown by the fact that the editor of a prominent scientific journal is found to have endorsed one of its most groundless hypotheses.—J. A. ALLEN.]

Birds of British Columbia and Washington.

TO THE EDITORS OF THE AUK:—

Dear Sirs:— Over the initials "C. F. B." there appeared in the last number of 'The Auk' a review of my final paper on the Birds of British Columbia and Washington.

Had the paper merited one half the space given it by its distinguished critic, or had that gentleman a much smaller influence than he is supposed to have as an authority on American ornithology, I should refrain from any rejoinder to his unhappy criticisms. Mayhap a few readers of 'The Auk' have taken some pains to verify the rather startling disclosures of C. F. B., and, like myself, have been somewhat amazed at the strange mixture of truth and fiction which he has heaped upon the article. But the majority have no time for such analysis; they read the review, translate the initials, and that settles it. For the just opinions of many such readers of our quarterly journal I have much regard, and, ere they pass final judgment on it, I would plead somewhat to the indictment.

The "principal fault" of the paper is stated to be "a certain lack of care and thoroughness in its preparation."

Six months of fairly diligent labor was spent almost exclusively in preparing the paper after my return to Philadelphia from the West. A preliminary report containing nearly all of the objectionable features designated by C. F. B., was published in 'The Auk.' All determinations of importance were based on comparisons with ample material from the principal museums and were in many cases confirmed by well-known active members of the A. O. U.

My knowledge of the bibliography of Washington and British Columbia birds is said to be "meagre," because of the "long array of species which he proceeds to add to the list of birds known to occur in each of these districts."

In support of this assertion my reviewer names twenty-six such species from one or the other of the two lists on pages 22 and 23 of my paper. On page 22, referring to the main list in question, viz., that of additions to previous faunal lists of Washington, I say, "to the combined lists of Cooper, Suckley and Lawrence twenty-five species of Washington birds are added. *These, with those not included in Mr. Lawrence's Grays Harbor lists are:*"—then follows the list. Anyone taking the trouble to look over the names excepted to by C. F. B., "in one or the other list" will see that he has quite ignored my foot-note on page 23, which states that species in the list previously recorded by Cooper and Suckley are designated by an asterisk.

Two thirds of the birds taken exception to have this mark. My critic has utterly failed to see that the list is simply one of species seen by me and not recorded by Lawrence, and in so doing he has grossly misrepresented me. Among other species in my Washington list, he gives as "heretofore recorded," *Aythya americana*, *Colymbus holbœllii*, *Larus brachyrhynchus*, *Totanus flavipes*, *Falco columbarius suckleyi* and *Cypseloides niger*! None of these being recorded in Cooper, Suckley and Lawrence it makes no difference, so far as the intent of said list is concerned, whether these have been heretofore recorded or not. Apart from this, however, I would ask C. F. B. to verify his own statement in regard to these six birds by telling the readers of 'The Auk' just where

and by whom they were "previously recorded" for the State of Washington. To one so "fortunate" in his "bibliographical researches" surely this should be an easy matter!

It is almost a pleasure to state, however, that I have, by omitting to place asterisks after *Circus hudsonius*, *Asio wilsonianus*, *Chætura vauxii*, *Pica pica hudsonica*, and *Parus atricapillus occidentalis*, given my critic some cause of complaint. These omissions are not only lamentable errors but they illustrate in no small degree that "carelessness" which C. F. B. has in such eminent degree both denounced and practised on this occasion.

By way of climax to the sermon on "activity," "faunal peculiarities," and zoögeography,— we read the following: "but they [readers of 'The Auk'] may wonder at the carelessness which enables the author to swell his British Columbia list *with species mentioned by Chapman and Fannin*[1] (whose recent paper he does refer to), and even to 'add' to the Washington record two birds whose type specimens undoubtedly came from that State."

The two birds referred to are *Chætura vauxi* and *Dryobates pubescens gairdneri*.

My previous remarks on the Washington list cover both these cases, the Woodpecker being starred and, in the original copy, the Swift also, but in revising the proof the printer dropped the star and the omission was overlooked in final proof-reading. Whether the types of these species came from Washington is far from the "undoubted" fact which C. F. B. would have us believe. No careful critic presumes to set hard and fast lines to the type localities of J. K. Townsend's Columbia River novelties.

Coming now to the main part of his accusation, C. F. B. has charged me with adding as new to British Columbia, species already recorded by Fannin and Chapman.

Notwithstanding the gravity of that charge he does not designate which they are, leaving it to be inferred there are several. In his list of errors I have found two names coming under this category. One of these is *Bubo virginianus subarcticus* and, as is inferred, it may be found in the lists of both Chapman and Fannin. This was a pure and simple *lapsus pennæ* on my part and should have read *B. virginianus arcticus*. The annotated list would show any one, careful enough to inquire, that this was, as I have said, only a slip of the pen. It was due to carelessness, no doubt, but not the wilful carelessness implied by the terms of its condemnation. The other bird is *Glaucidium gnoma*. Chapman's list recorded only *G. gnoma californicum*. In Mr. Fannin's list all the Pygmy Owls of British Columbia are classed under one name, *Glaucidium gnoma*. Mr. Fannin's list was chiefly based on western Cascade specimens, and as he fails to distinguish between the type and its subspecies, and very little of his collecting was done in the restricted "interior" habitat of true *gnoma*, it is evident that *californicum* was the form to which he had chief reference.

[1] Italics mine.

I was permitted to examine all of Mr. Fannin's specimens in the Victoria Museum but found no *gnoma* skins among the *californicum*. If Mr. Fannin had intended in any way to record *gnoma* instead of *californicum*, or to lump the two under one name, he failed to say anything about it in a letter of exceptions to my paper written me on receipt of a copy. On these accounts I thought, and still maintain, that it was just to consider Fannin's reference to the Pygmy Owl as referring authoritatively to no one form but presumably to *californicum* for the most part, and that I, having an authentic specimen of *gnoma* from the interior, was justified in recording it as a bird new to the recorded fauna of British Columbia. Mr. Fannin, having taken no exception to this ruling, I trust C. F. B. will accept it also, and absolve me in both instances.

As to the value of my determinations on the status of certain species and races in the A. O. U. Check-list, this is not the time nor the place for either professional or amateur to venture judgment. Between much that we strive to decide in this line there is but the toss of a penny so far as the worth of individual opinion goes. The fiat of a Committee on Nomenclature is, logically and scientifically, not a whit better, perhaps, but for the sake of peace and harmony we are glad to have it.

SAMUEL N. RHOADS.

Philadelphia, Aug. 8, 1893.

[The foot-note which Mr. Rhoads assumes that I ignored was by no means overlooked. This foot-note related to a double-columned list of birds headed by the words: "To the combined lists of Cooper, Suckley and Lawrence twenty-five species of Washington birds are added. These with those not included in Mr. Lawrence's Gray's Harbor lists are:" [here followed the list]. It seemed too unlikely that Mr. Rhoads could think it worth while to institute such a formal comparison between his list and that of any single one of the various previous writers on Washington birds, and there appeared no reason why Mr. Lawrence's lists should be selected and the rest ignored. Did he mean it to be understood that the species referred to were new for Washington (ruling out the Cooper-Suckley records, much as he had done those of J. K. Lord)? It certainly appeared so, and such was assumed to be the case. What Mr. Rhoads's real intentions were, I am now even more in doubt. For in this letter he says "the list is simply one of species seen by me and not recorded by Lawrence," yet only a few lines above he has said it is a list "of additions to previous faunal lists of Washington," thus, himself, definitely confirming my conclusion which he says "grossly misrepresents" him. Taking this latter sentence in connection with the statement on the opening page of the paper itself: "Since the Cooper-Suckley Pacific Railroad Reports nothing of much value relating to Washington birds has been published except the local lists of Mr. R. N. [*sic*] Lawrence," the inference is unavoidable that at that time he really did not know of any other writers on the subject.

The principal criticism whose justice Mr. Rhoads denies, was upon his lack of care and thoroughness. Many further evidences of this might be shown, were it not too well illustrated by his own admissions in the 8th, 11th, and 13th paragraphs of the present letter, and by the fact that not even now, in writing it, did he take the trouble to extend his 'bibliographical researches' to such publications, for instance, as the Bulletin of the Nuttall Club and the Bulletin of the American Museum. They would have supplied him with records of several of the birds which he selects to confound his reviewer. The following are records for all the species he names:—

Aythya americana — *Hubbard*, Zoe, III, 142.

Colymbus holbœllii — *Chapman*, Bull. Am. Mus. N. H., III, 129, 155.

Larus brachyrhynchus — *Chapman*, Bull. Am. Mus. N. H., III, 130, 155.

Totanus flavipes — *Townsend*, 'Narrative,' 335.

Falco columbarius suckleyi — *Brewster*, Bull. N. O. C., VII, 227.

Cypseloides niger — *Hubbard*, Zoe, III, 143.

What he says about the lack of an exact type locality for *Chætura vauxii* and for *Dryobates pubescens gairdnerii*, has nothing to do with the case. *Chætura vauxii*, Townsend explicitly states, came from the Columbia River, and Audubon (for it was he who described the Woodpecker—not Townsend as Mr. Rhoads has it) gives the same source for his type.

More might have been said concerning his discussion of certain subspecies, but it is hardly worth while. If Mr. Rhoads really does not care "the toss of a penny" for "the fiat of a Committee on Nomenclature" as to the value of his "determinations on the status" of such forms as *Melospiza lincolni striata* and *Sylvania pusilla pileolata*, it is perhaps fortunate for his peace of mind.— C. F. BATCHELDER.]

NOTES AND NEWS.

MR. AUSTIN F. PARK, an Associate Member of the American Ornithologists' Union, died at his home in Troy, New York, September 22, 1893, aged 68 years. Mr. Park was born in Canaan, Columbia County, N. Y., May 11, 1825, and after a preparatory education entered the Rensselaer Polytechnic Institute, in Troy, from which he was graduated in 1841 with the degree of Civil Engineer. He remained, however, for some time longer at the Institute, as a student of chemistry, geology, botany and natural history. Later he was engaged in engineering and surveying, and afterwards as a mathematical and philosophical instrument maker, and was