

for certain West Indian birds. They also occasionally crept into Mr. Lawrence's papers in 1871. At this time (1864-1871), as Dr. Stejneger observes, "trinomial were in the air infecting all." In 1872 the system of trinomial for geographical races, or subspecies, may be said, however, to have been first formally avowed and adopted, having been used systematically by Coues, Ridgway, and Allen, in papers or works published during that year—by the latter in a paper* published in July, by Dr. Coues in his 'Key,' published in October, and by Mr. Ridgway in a paper† published in December. They had also been adopted by the authors of the 'History of North American Birds,' the greater part of the first volume of which was put in type during 1872,‡ although the work was not published till January, 1874.

Dr. Stejneger also calls attention to the chief objection to trinomialism which has thus far been raised, namely its liability to abuse by indiscreet authors, and arrives at the conclusion that this danger is not very formidable; it being found by actual count that as regards North American birds described between 1871 and 1881, that "the percentage of the untenable trinomial is vastly smaller than that of the binomial," and that if trinomial had not come into use several of the forms described under trinomial would have entered the list of synonyms as pure binomial.

Finally Dr. Stejneger takes up and very ably answers the questions, "(1) Is it necessary to recognize those slight differences which are seen in the so-called local races? (2) Is it necessary to have them designated by a separate name? (3) Why is the trinomial designation to be preferred?" Those who may still have doubts on these points would do well to carefully weigh the replies Dr. Stejneger gives to these questions.—J. A. A.

Baird, Brewer, and Ridgway's Water Birds of North America.§—The publication of the long-looked-for 'Water Birds of North America,' by Baird, Brewer, and Ridgway, is *the* event of the year 1884 in the history of North American ornithology. Beyond the necessarily brief treatment bestowed upon the group by Dr. Coues in the two editions of his 'Key,' the Water Birds of North America, while by no means wholly neglected, especially as regards their nomenclature and classification, have not as a

* 'Orn. Reconm.' etc., in Bull. M. C. Zool., III, pp. 113-183, July, 1882. See especially p. 119, where the use of varietal names is formally advocated, and 'this method' stated to be 'already in more or less common use.'

† 'On the Relation between Color and Geographical Distribution in Birds,' etc., in Am. Journ. Sci. and Arts (3) IV, pp. 454 *et seq.*, Dec., 1872.

‡ Cf. Am. Journ. Sci. and Arts (3) IV, p. 457.

§ Memoirs of the Museum of Comparative Zoölogy at Harvard College, Vols. XII and XIII. The Water Birds of North America. By S. F. Baird, T. M. Brewer, and R. Ridgway. Issued in continuation of the publications of the Geological Survey of California. J. D. Whitney, State Geologist: Boston. Little, Brown, and Company, 1884. 2 vols. 4to. with numerous illustrations in the text. (Vol. I, pp. i-ix, 1-537, June, 1884; Vol. II, pp. i-vi, 1-552, August, 1884.) Issued with both plain and colored plates.

whole been the subject of detailed systematic treatment since the publication of Baird's 'Report' in 1858. In this work the treatment was purely technical, so that we must go back to Audubon before we find the same general handling of the subject from the biographical standpoint. Therefore the need of a work of the character and scope of the present one has long been felt, and impatiently awaited. Its delay, as is well known, has been due to the difficulty of securing a publisher who would undertake the pecuniary risk of so expensive an undertaking. Consequently ornithologists have great reason to be grateful to Professor J. D. Whitney, through whose interest in the work, and the generous coöperation of Mr. Alexander Agassiz, is due its final appearance. Through these combined influences the work, from the bibliographical point of view, has rather complex relations. Primarily it forms volumes XII and XIII of the 'Memoirs' of the Museum of Comparative Zoölogy. It also is complementary to the 'Land Birds' of the California Geological Survey, Professor J. D. Whitney, State Geologist, and to 'A History of North American Birds: Land Birds,' by the authors of the present volumes, of which work it is virtually a continuation. It has also its own separate title of 'The Water Birds of North America.' Professor Whitney, in the 'Introduction' to the present work, explains in detail this complicated relationship, and the circumstances to which it is due. As regards the method of illustration, the work is uniform with the 'Land Birds' of the California Survey, the numerous wood-cuts being inserted in the text, and colored by hand (in the colored copies), instead of being in part grouped in plates and colored by chromo-lithography, as was the case in the three volumes of the 'History of North American Birds.'

In regard to the text of the 'Water Birds,' the technical part, although originally written some years since, has been brought down with the fullest detail, and with even more than Mr. Ridgway's usual care, to the date of printing; the biographical part remains as left by Dr. Brewer at the time of his death in January, 1880, and is therefore practically nearly five years behind the date of publication. This is certainly unfortunate, in view of the recent rapid increase of our knowledge of the habits and distribution of our water birds, particularly the marine species, but under the circumstances of publication this appears to have been nearly unavoidable.

The water birds are divided into, first 'A. Waders,' and 'B. Swimmers,' "for the convenience of the student," and tentatively further subdivided into the following nine 'orders': I, Herodiones; II, Limicolæ; III, Alektorides; IV, Phænicopteri; V, Anseres; VI, Steganopodes; VII, Longipennes; VIII, Tubinares; X, Pygopodes. Not only are the characters of the nigher groups quite fully given, but there are analytical keys to the minor groups, as well as to the species and subspecies. The diagnoses and descriptive matter are ample; extremes and averages of measurements of often large series of specimens are usually given, and also special attention to the matter of individual as well as geographical variation. In short, it is sufficient to say that the technical matter, though condensed, is admirably presented.

Perhaps the most striking, and to the lay student the most unlooked for and unwelcome feature of the work, are the numerous changes in nomenclature as compared with Mr. Ridgway's 'Nomenclature of North American Birds,' published in 1881, and the numerous additions to the list of previously recognized North American species. The additions, 23 in number, include, besides several Old World species, some half a score described within the last two years. The additions are:—

<i>Ardea wardi.</i>	<i>Larus kumlieni.</i>
<i>Ægialitis mongolica.</i>	<i>Larus nelsoni.</i>
<i>Eurynorhynchus pygmæus.</i>	<i>Larus schistisagus.</i>
<i>Rallus beldingi.</i>	<i>Larus minutus.</i>
<i>Fulica atra.</i>	<i>Xema furcata.</i>
<i>Olor cygnus.</i>	<i>Diomedea exulans.</i>
<i>Fuligula rufina.</i>	<i>Diomedea melanophrys.</i>
<i>Mergellus albellus.*</i>	<i>Puffinus borealis.</i>
<i>Pelecanus (fuscus?) californicus.†</i>	<i>Æstelrelata fisheri.</i>
<i>Phalacrocorax dilophus albociliatus.</i>	<i>Æstelrelata gularis.</i>
<i>Phalacrocorax pelagicus robustus.‡</i>	<i>Cepphus grylle.‡</i>
	<i>Cepphus motzfeldi.</i>

The principal changes in nomenclature are indicated below, the left hand series being the names used in the 'Nomenclature' of 1881, the right hand series those adopted in the 'Water Birds.' In many cases the changes have been for some time foreseen as inevitable; in others their necessity has only recently become evident; a few are here made for the first time. The *bouleversement* is most radical among the Loons, Grebes, and Auks, where the subversions in several cases amount to the actual transposition of names from one group to another. While such transpositions are to be deplored, the future stability of nomenclature of course demands their adoption when shown to be inevitably necessary.

'NOMENCLATURE.'

'WATER BIRDS.'

<i>Herodias alba egretta.</i>	<i>H. egretta.</i>
<i>Vanellus cristatus.</i>	<i>V. capella.</i>
<i>Charadrius pluvialis.</i>	<i>C. apricarius.</i>
<i>Ægialitis cantica nivosa.</i>	<i>Æ. alexandrina nivosa.</i>
<i>Gallinago media wilsoni.</i>	<i>G. wilsoni.</i>
<i>Gallinago media.</i>	<i>G. cœlestis.</i>
<i>Totanus glottis.</i>	<i>T. nebularius.</i>
<i>Lobipes hyperboreus.</i>	<i>L. lobatus.</i>
<i>Grus fratercula.</i>	<i>G. canadensis.</i>
“ <i>canadensis.</i>	<i>G. mexicanus.</i>

* Added in view of its probable future occurrence.

† Subsp. nov.

‡ Not *Uria grylle* of the Check List, which is now *Cepphus mandti*.

'NOMENCLATURE.'

Olor americanus.
Bernicla leucopsis.
Harelda glacialis.
Polysticta stelleri.
Lampronetta fischeri.
Somateria mollissima dresseri.
Tachypetes aquila.
Phalacrocorax violaceus.
P. violaceus resplendens.
Phalacrocorax bicristatus.
Rissa tridactyla kotzebuei.
Sterna regia.
Sterna cantianca acuflavida.
Sterna fluviatilis.
Sterna macrura.
Hydrochelidon lariformis surinamensis.
Stercorarius buffoni.
Diomedea brachyura.
Diomedea culminata.
Fulmarus glacialis pacificus.
Priocella tenuirostris.
Puffinus melanurus.
Puffinus fuliginosus.
Cæstelata bulweri.
Fregatta grallaria.
Podiceps holbœlli.
Tachybaptus dominicus.
Colymbus torquatus.
Colymbus arcticus.
Colymbus adamsi.
Colymbus pacificus.
Colymbus septentrionalis.
Alca impennis.
Utamania torda.
Lomvia troile.
Lomvia troile californica.
Lomvia arra.
Lomvia arra brünnichi.
Uria grylle.
Uria columba.
Uria carbo.
Simorhynchus pygmæus.
Phaleris psittacula.

'WATER BIRDS.'

O. columbianus.
Branta leucopsis.
H. hyemalis.
Eniconetta stelleri.
Arctonetta fischeri.
S. dresseri.
Fregata aquila.
P. pelagicus.
P. pelagicus resplendens.
P. urile.
R. tridactyla pollicaris.
S. maxima.
S. sandvicensis acuflavida.
S. hirundo.
S. paradisæa.
H. nigra surinamensis.

S. longicaudatus.
D. albatrus.
Thalassogeron culminatus.
F. glacialis glupischa.
P. glacialisoides.
P. cinereus.
P. stricklandi.*
Bulweria bulweri.
Cymodroma † grallaria.
Colymbus holbœlli.
Podiceps dominicus.
Urinator immer.
Urinator arcticus.
Urinator adamsi.
Urinator pacificus.
Urinator lumme.
Plautus impennis.
Alca torda.
Uria troile.
Uria troile californica.
Uria lomvia arra.
Uria lomvia.
Cepphus mandtii.
Cepphus columba.
Cepphus carbo.
Phaleris pygmæus.
Cyclorhynchus psittacula.

* Nom. sp. nov.

† Gen. nov.

The reductions from the list of 1881 number only two, namely: *Chen albatus* of the 'Nomenclature' is now made a synonym of *Chen hyperboreus*, and *Brachyrhamphus brachypterus* is similarly referred to *Synthliboramphus antiquus*.—J. A. A.

Coues and Prentiss's Avifauna Columbiana.—The title* of this interesting brochure, although explicit, fails to fully imply the scope of the work, 4 pages of which are devoted to the 'Literature of the Subject,' 17 to the 'Location and Topography of the District,' 5 to the 'General Character of the Avifauna,' 78 to the 'Annotated List of the Birds,' 8 to a 'Summary and Recapitulation,' and 3 to the 'Game Laws of the District,' following which is a full index. The 100 woodcuts, illustrating structural characters of the birds, are mainly from previous publications by the senior author. Three of the maps—colored, and drawn to the scale of 3 5/9 inches to the mile—illustrate minutely the topography of the three regions into which the District is divided, while the fourth is a general map of the District and immediately contiguous country.

The original 'List of the Birds of the District of Columbia,' etc., published in 1862, contained 226 species, only one of which proves to have been included erroneously. The additions made in the twenty-two years which have intervened number 23, making the total number of the present list 248. In rewriting the list the authors, besides incorporating the additional species, have expanded their annotations about four-fold, through fuller notices of the habits of the species, and in noting the changes in the bird-fauna resulting from the growth of a large city. The subject in general is treated not only with great fulness, but is very attractively set forth, and in general plan forms an excellent model of what a faunal list should be. The preliminary matter includes an account of 'Rail Shooting on the Anacostia River Marshes,' illustrated with two plates. In the 'Recapitulation,' the species are arranged in five categories, from which it appears that 47 are permanent residents, 46 winter residents, and 66 summer visitors, while 49 occur only as spring and autumn migrants, and 40 as very rare or accidental visitors.—J. A. A.

Ridgway on Rare Neotropical Birds.†—The species considered are *Harporhynchus ocellatus* Scl., *Pyrranga erythrocephalus* (Sw.), *Zonotrichia quinquestriata* Scl. & Salv., *Contopus ochraceus* Scl. & Salv., and *Panyptila cayennensis* (Gm.), about which there are brief remarks respecting their affinities. Mr. Ridgway is inclined to restrict the genus

* Bulletin of the United States National Museum, No. 26. Avifauna Columbiana: being a list of Birds ascertained to inhabit the District of Columbia, with the times of arrival and departure of such as are non-residents, and brief notices of habits, etc. The Second Edition, revised to date and entirely rewritten. By Elliott Coues, M. D., Ph. D., Professor of Anatomy in the National Medical College, etc., and D. Webster Prentiss, A. M., M. D., Professor of Materia Medica and Therapeutics in the National Medical College, etc. Washington: Government Printing Office, 1883. 8vo., pp. 133, 100 woodcuts, frontispiece, and 4 folded maps.

† Notes upon some Rare Species of Neotropical Birds. By Robert Ridgway, Curator Department of Birds, United States National Museum. Ibis, Oct. 1883, pp. 399-401.