

*luxuosa* to *X. yncas*; *Perisoreus griseus* and *obscurus* to *P. canadensis*; *Thryomanes brevicauda* to *T. bewicki*; *Turdus confinis* to *T. migratorius* and, most amazing, *Corvus brachyrhynchos caurinus* transferred as a subspecies to the Fish Crow (*C. ossifragus*). While this northwestern coast bird has been regarded as a distinct species by some and called a "fish crow" on account of habits and voice, it has nothing to do with the Fish Crow of our southern Atlantic coast. The latter is uniform highly glossy above and below of a bluish or greenish cast, while *caurinus* is a duller bird with a somewhat shell-like pattern on the back and of a reddish-purple or violet cast, resembling in all these characters the common American Crow (*C. brachyrhynchos*) (cf. Rhoads, Auk, 1893, p. 21; Stone, Auk, 1903, p. 271). The names of two forms of *Auriparus* are changed, as a result of Grinnell's study of the type of *A. flaviceps*, and *Baeolophus i. griseus* becomes *Parus i. ridgwayi* as a result of lumping *Baeolophus* with *Parus* there being a prior *Parus griseus*.

All of these changes, it will be noticed, are due to a difference of opinion as to the ornithological relationship of species and subspecies and there is only one change in a North American bird name due to "nomenclature" (which is usually blamed for all our changes in names!) and this is the use of *sordida* in place of *sieberi* as the specific name of the Arizona Jay the former name having priority. This is certainly a matter for congratulation! Dr. Hellmayr recognizes all of the subspecies of the 'Check-List' with the exception of *Polioptila melanura abbreviata* which he regards as identical with *P. m. margaritae*, while in addition he recognizes four forms of *Perisoreus canadensis* not included in the 'Check-List' i. e.; *nigricapillus*, *barboursi*, *albescens* and *rathbuni*. Also *Sialia sialis grata*, *Catherpes mexicanus polioptilus* and *Cyanosylvia suecica robusta* (as distinct from *S. s. suecica*). Six races described after the 'Check-List' was in press, mainly by van Rossem, are also recognized.

While it would be ungenerous to offer any criticism of such a welcome, useful, and painstaking work as that which Dr. Hellmayr is producing for us, we necessarily cannot all see eye to eye on all matters of ornithological relationships and the methods of expressing them. Personally we find no reason for relegating certain apparently distinct forms to the grade of subspecies of other species even if we abandon entirely the criterion of intergradation as our distinguishing mark between species and subspecies (see *antea* p. 31) but perhaps that is exactly what Dr. Hellmayr has done! At any rate in discussing the San Lucas Robin which, so far as we know, has never been claimed to intergrade with *Turdus migratorius propinquus* he says, "obviously merely an excessively pale race of the Robin" and makes no claim for intergradation. Apparently Dr. Hellmayr's groupings are based on the "Formenkreis" idea rather than upon intergradation.

At any rate we offer our hearty congratulations and thanks for another volume of this indispensable work and the hope that the author may be able to complete his task at no very distant date. The eighth part we are informed is already in type.—W. S.

**Friedmann on 'The Instinctive Emotional Life of Birds.'**—This notable paper<sup>1</sup> is, we are informed, the first of a series of studies on 'The Evolution of Instincts and Emotions' arranged and edited by Dr. Ben Karpman and was read before the Washington Society for Nervous and Mental Diseases.

Beginning with an historical account of the literature of the subject Dr. Friedmann finds one group of writers, wholly uncritical, "who assume an anthropomorphic attitude and endow birds with all of the virtues and, curiously enough, none of the

<sup>1</sup> The Instinctive Emotional Life of Birds. By Herbert Friedmann. The Psychoanalytic Review, Vol. XXI, Nos. 3 and 4, July and October, 1934. Reprint, pages 1-57.

vices of humankind. On the other hand there are those who explain all non-human behavior on the basis of physiological mechanics and deny to other animals anything even remotely savoring of psychic attributes." To one who has studied birds as birds, he adds, neither of these approaches seems justifiable.

In discussing instinct and emotion he explains that if action is purely instinctive, and is frustrated, the animal tries again and again or stops and does something else, without becoming excited or irritated; but, if the action is the result of emotion, frustration leads to irritability, excitement and anger. A House Wren trying to force a long twig sideways into the hole of a bird box is an example of the former while many human examples are to be found of the latter; birds, however, seem to possess only instinctive emotions.

In comparing human and avian minds the author calls attention to the attitude of birds toward sickly young. Instead of showing more concern and attention in their time of need, as humans would do, they quickly become indifferent and later irritated and even hostile to the unresponsive young. The instinctive care of the young Cuckoo, still in the nest, by the foster parents and their indifference toward their own young which have been thrown out, although still in full view, is another example of this difference in mental attitude.

With such introductory discussion Dr. Friedmann goes on to consider Fear, Greed, Social Emotions, and Cruelty, which he groups together as Permanent Emotions; and Courtship Behavior, and Love, which he calls Cyclical Emotions. There is also full discussion of the Loss of Instinctive Emotions, especially with respect to Parasitism, a subject to which Dr. Friedmann has given a great deal of attention.

In his conclusions he states that "the great similarity between so many aspects of avian and human behavior suggests (as it might be expected) that human conduct when stripped of its civilizing morals, learning, and other cultural embellishments, etc., is basically not very different from that of birds." While we are unable in the space at our disposal to do justice to Dr. Friedmann's paper, which is so full of meat that it should be read in its entirety, we must mention one illustration that he cites of the errors that observers without training in interpreting animal behavior will fall into. This is the case of the so-called "broken-wing ruse" practiced by the Killdeer and other birds. This is popularly explained as a device to draw an intruder away from the nest or young, but Dr. Friedmann considers it as apparently the result of conflict between the emotion of fear occasioned by the approach of an apparent enemy, and the reproductive emotion which makes the bird loath to leave the nest. The conflict of emotions produces muscular inhibition or inability to fly, until the fear emotion gains control as the bird gets farther and farther from the nest; an illustration of how psychic factors may induce physical changes. The reviewer has had abundant experiences with the Killdeer which would seem to substantiate Dr. Friedmann's views, at least in part. We have found that birds with newly laid eggs rarely practice the broken-wing ruse while those with well incubated eggs do so, and that birds with full grown young have also been seen to practice the "ruse," an action which our author, in the case of another species, terms "a habit lingering beyond its usual duration."—W. S.

**Richmond's 'Quest for Birds.'**—So many bird students have felt it necessary to publish the results of their observations in a more or less popular way that when we picked up the present volume<sup>1</sup> we supposed, influenced perhaps by the title, that

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<sup>1</sup> Quest for Birds | The Problems and Pleasures | of an English Bird-Watcher | By | W. K. Richmond | London | H. F. & G. Witherby | 326 High Holborn W. C. 1. Pp. 1-196, 1 plate. Price 7 shillings 6 pence net.