Stresemann on Early Accounts of Birds of Paradise.[1] — This paper consists of a series of extracts from the earliest works on New Guinea which contained accounts of the Paradise birds with comments by the author. There are also reproductions of two curious Italian water colors of the second half of the Sixteenth Century in the possession of the Tring Museum which represent skins of Birds of Paradise.— W. S.

Wright and Allen's Field Note-book of Birds.[2] — This work has the advantage of other similar field note-books in having an outline drawing at the top of each page upon which the colors of the various parts may be written while the bird is under observation, producing a quicker and more accurate result than any written description. Most pages are headed by a typical passerine bird followed by a few pages of woodpeckers, gulls, herons, shore-birds, ducks, and hawks. A schedule for data other than colors is printed below the figure. There are also at the end a list of local migration dates and a number of cross-lined pages for records of daily observations. This seems to be an admirable, note-book for the beginner who has yet to 'learn his birds' and is studying the bird in the bush rather than in the hand.— W. S.

Bryant on the Economic Status of the Western Meadowlark.[3] — After the publication of at least five preliminary papers on this subject, the results of the special investigation undertaken by the State of California are now summarized. The present paper differs chiefly from the bulkier of its predecessors in the larger amount of historical and philosophical matter contained. More attention will be paid to this new matter, therefore, than to that which has previously been reviewed.[4]

The reviewer hopes he may be pardoned for taking a more critical view of this newer, more theoretical material, since his attitude results from no animus, but from a desire to put things in a proper light. The chief effort of Bryant's thesis apparently is to maintain an aspect of originality. Yet he like others with the same ambition, in the end depends mainly on the tried and true. Dissatisfaction with the existing order is expressed in the following paragraph from the preface:

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[1] Was wussten die Schriftsteller des XVI. Jahrhunderts von den Paradiesvogeln? Ein Beitrag zur Geschichte der Ornithologie. Von Erwin Stresemann. Novitates Zoologicæ. XXI. pp. 13–24, pls. 1–2. February, 1914.

[2] Field Note-Book of Birds. By A. H. Wright and A. A. Allen. Dept. of Zoölogy, Cornell University. Including Outlines for the Recording of Observations and Sheets for Preserving a Check-List of the Birds Seen. Ithaca, N. Y. 1913. Price, 50 cents; postage, 4 cents. Corner Book-Stores, Ithaca, N. Y.

[3] Bryant, H. C., A determination of the economic status of the western meadowlark (*Sturnella neglecta*) in California. Univ. of Calif. Publ. in Zoölogy, Vol. 11, No. 14, pp. 377–510, pls. 21–24, 5 text figs. Feb. 27, 1914.

[4] Auk, Vol. XXX, No. 1, Jan., 1913, pp. 132–133, No. 2, April, 1913, pp. 294–295, No. 3, July, 1913, p. 453.

" Considerable difficulty has been experienced in that there has been, and now is, a difference of opinion as to the criteria to be used in the determination of the economic status of a bird. The ideas which have been advanced in the past, and even those of the present day, appear to be unsatisfactory, or at least untrustworthy. It seemed, therefore, that a review of past methods, with the addition of such new ones as appeared to be valuable, might prove not only interesting but of considerable value to future workers in the field. A similar lack of information regarding methods of stomach examination has been evident. A detailed account of the method used in this investigation, therefore, seems justified."

To say the least it is rather odd to pronounce untrustworthy, methods which are used almost without change or improvement in one's own work. It is true some pretence is made in this paper of putting unusual weight on field investigations, periodical weighing of nestlings, determination of time of digestion, etc., but it is noticeable that the largest and most solid part of the paper is based on stomach examination. Previous investigators have used all of these methods, have wrestled with the same problems and have unanimously settled upon the examination of stomachs as the most reliable criterion to the economic value of birds. Bryant comes to the same conclusion on the eightieth page of his paper, saying: " It seemed best to concentrate on the usual method of stomach examination." (p. 456.)

We cannot believe that the ideas advanced in the past, and even those of the present day are so very unsatisfactory, when we see how fully they are adopted and incorporated in Bryant's discussions. The first paragraph in the paper is paraphrased from Biological Survey Bulletin 43, the second paragraph from Bulletin 30, the section on history of methods in Economic Ornithology differs little from that by Weed and Dearborn,[1] and that on a comparison of methods in economic ornithology is largely extracted from a paper[2] by the reviewer. The promised detailed account of the methods of stomach examination is in reality brief, and by no means an improvement on that given by Judd in Biological Survey Bulletin 15, (pp. 12–15).

Notice of originality is served in italics, on page 388, in the following words: " The thing that economic ornithology has not afforded us as yet in a detailed study of the food of a particular bird in a given locality throughout the whole year." Evidently this is what Bryant counts upon as the chief contribution of his paper to economic ornithology. Yet it is precisely what John Gilmour did in 1894–5,[3] for three species of birds, the wood pigeon, rook, and starling, of which he examined 265, 355 and 190 stomachs respectively, which were collected in all months, chiefly on a single estate in Fifeshire, Scotland.

As an economic report, the present paper is marred by the extensive theoretical digressions, but as the previous publications of the State Game

[1] Birds in their Relations to Man, 1903, pp. 17–26.
[2] Auk, Vol. XXIX, No. 4, Oct., 1912, pp. 449–464.
[3] Trans. Highland and Agr. Soc. Scotland, 1896, pp. 1–93.

Commission and Agricultural Experiment Station, not this, are for popular distribution, little harm is done. There is much to commend in the fresh point of view manifest throughout the report, for instance, the computations of quantity of food consumed. One is that some 340 tons of insects are eaten daily in the breeding season by Western Meadowlarks in the Sacramento and San Joaquin Valleys alone. On pages 461, 487–8 and elsewhere Mr. Bryant points out the importance of availability of food modifying choice; this is the conclusion reached by all investigators, that within its own sphere a bird is most likely to feed on what is abundant or most easily obtained. The remark (p. 469) that: "If birds should become numerous enough actually to control the number of insects, they would doubtless become a greater pest than the insects themselves," is eminently sane and is worthy of the attention of those who would increase birds to the point where they would render insecticides unnecessary.

The statement of the relative merits of parasitic insects and birds (pp. 470–471) is excellent and is here quoted:

"It is readily acknowledged that birds are not the only checks on the increase of insects. The very large toll taken by them, however, places them in the front rank as insect destroyers. Parasites can become abundant only when their host becomes abundant and do their work effectively only after the insect has had sufficient time to cause damage. Birds in order to keep alive must wage a continual warfare on insect life, no matter what the abundance. They are evidently therefore, to be relied upon as more dependable regulators than parasites."

On pages 480–487 is presented a discussion of the question: "Do protective adaptations of insects protect them from the attacks of birds?" This query is brought forcibly to the attention of everyone who examines the stomachs of birds, and the general tendency is to answer it in the negative. Still the problem deserves full consideration, to which Bryant's chapter is a valuable contribution. One point in this section emphasizes the fact that our knowledge of a bird's food is never final. Having even a very large number of stomachs, we may collect one more and find in it items of food unrepresented in any of the others. Bryant found no Coccinellids in the stomachs he examined, and is inclined to take it as an indication that these beetles are "protected." Professor Beal, however, found a Coccinellid (*Hyperaspis dissoluta*) in the stomach of a California Meadowlark and has found others in those of the eastern species. The fact that Coccinellidæ are unusually abundant in California is as apparent from the stomach contents of birds as from any other evidence, a fact which goes far to show that these beetles pay their proportionate toll to the bird world.

In concluding, surprise must be expressed that Mr. Bryant's report makes no reference to Professor F. E. L. Beal's article on "Our Meadow Larks in Relation to Agriculture,"[1] which was written in response to the same situation that brought forth the publication here reviewed.— W. L. M.

[1] Yearbook, U. S. Dept. Agriculture, 1912, (1913), pp. 279–284.