FROM FIELD AND STUDY

Remarks on the Food of Young Cowbirds.—To the writer the speculation has been interesting as to whether young Cowbirds must make shift to live and grow on diets varying widely according to the foster parents. An effort has been made to collect material bearing on the problem, but with little success. The vicinity of Washington is a poor place for Cowbirds. However 14 stomachs from other localities have been examined. The distribution among foster parents is as follows: *Icterus galbula* 1, *Pooecetes gramineus* 2, *Melospiza melodia* 5, *Vireosylva olivacea* 2, *Vireosylva gilva* 1, *Dendroica aestiva* 2, and *Geothlypis trichas* 1.

On the whole the evidence is very plain that these species give to the young cowbirds the normal diet for their own nestlings. For instance the Vesper Sparrows were the only birds to feed the terrestrial cutworms; but this is a very natural thing for these ground loving birds to do. Only Song Sparrows fed carabid beetles, and weevils, and more than a trace of seeds. This diet agrees with that described for the sparrows by Judd.[1] Moreover three of the Cowbirds fed by Song Sparrows had a bunch of vegetable fibers in their stomachs and were the only nestlings so favored. The Yellowthroat and Song Sparrow were the only ones to feed snails. The diet of the nestlings fed by the Red-eyed Vireo agrees with previous records for this bird in the inclusion of tree-living homoptera. The youngsters foisted upon Yellow Warblers were the only ones treated to moths, an item known to be given to the nestlings of other warblers.

These records show the adaptability of Cowbirds, a characteristic which must receive a severe test in certain cases. For instance the horned larks and various species of blackbirds and sparrows, habitually feed seeds and hard insects to their young. The Rose-breasted Grosbeak uses the "nasty" potato beetle for baby food; and the Cedarbird uses a large proportion of fruit. Perhaps the greatest departure from the average nestling diet among the species parasitized by Cowbirds is in the case of the Turtle Dove. This bird feeds its young entirely on vegetable matter, some of it half-digested, and mixed with a secretion of the crop, being the substance called pigeon's milk. It would be of great interest to know whether cowbirds are ever reared on this pabulum.

Samuels remarks that "This bird although subsisting principally on various seeds and small fruits, destroys great numbers of insects, particularly in the breeding season; in fact its young are fed entirely on insects and their larvæ, and the well known wire-worms."[2] It has justly been observed before that the credit for choice of insects consumed by young Cowbirds belongs strictly to the foster parents. Considering the food of adult Cowbirds alone the balance is in favor of the species. But when we reflect that each Cowbird brought to maturity is the cause of the death of three or four birds which would have been just as beneficial in the nestling stage, and probably more so in later life, the right of the Cowbird to protection can well be questioned.—W. L. McATEE.

Notes on a Broken Leg in the White-rumped Shrike.—My friend, Dr. G. E. French, has called my attention to a peculiarly healed broken leg of a female White-rumped Shrike (*Lanius ludovicianus excubitorides*), which he had collected on February 18, 1911, for mounting.

The tibio-tarsus and fibula of the right leg had been broken squarely off about three-eighths of an inch above the distal end, as is shown in figs. I, II and III. The activity of the bird very evidently had prevented a union of the broken ends, which were separated a sixteenth of an inch, but which had finally been bridged together by two very strong bone arches. As healed, the lower end of the tibio-tarsus had a marked lateral bend, but not enough to attract attention before dissection. The muscles of the lower leg were well developed, which would indicate that the shrike had recovered good use of its foot.

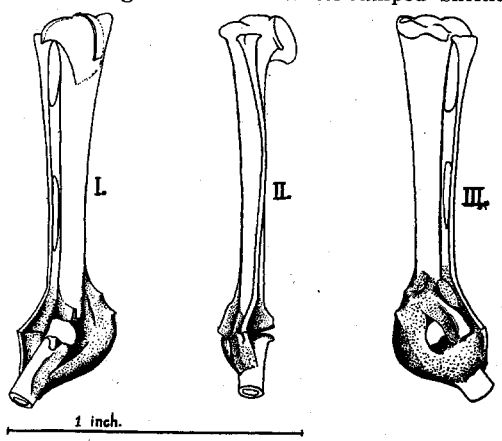

Fig. I is a view of the anterior surface, fig. II a view of the right lateral surface, and fig. III a view of the posterior surface.—CLARENCE HAMILTON KENNEDY.

1 Yearbook, U. S. Dept. Agr. [1900] 1901, pp. 419-422.
2 Samuels, E. A., U. S. Agric. Rep. [1864] 1865, p. 426.