(8) C-607600 Banded 3/4/33, and shipped on the day banded by express to Voltage, Oregon, and there liberated. Retrapped at Avery Island 12/20/35, 12/5/36, 12/24/38, and killed in the vicinity of Avery Island 11/26/40.

(9) 34-547523 Banded 11/13/34. Retrapped at Avery Island 11/15/36, 11/13/37, and killed in the vicinity of Avery Island 11/28/40.

(10) 34-552446 Banded 2/4/35, and shipped the same day banded by express to Berkeley, Calif., and there liberated. Retrapped at Avery Island, La. 2/6/37, 12/16/39, and killed in the vicinity of Avery Island 12/1/40.

(11) 34-552747 Banded 2/21/35, and shipped same day as banded by express to Cambridge, Maryland, and there liberated. Retrapped at Avery Island 12/23/39. Killed in the vicinity of Avery Island 11/28/40.

(12) 36-690279 Banded 12/31/36. This bird was retrapped at Avery Island 1/11/41, and band was so badly worn that it was replaced by band 41-616741.

Avery Island, Louisiana.

GENERAL NOTES

A Barn Owl's Record.—Barn Owl B 674404, one of four nestlings banded May 11, 1936 at Chilmark, Marthas Vineyard, Mass., by George D. Eustis, furnishes an interesting bit of life history. This bird, a female, chose Hunt's Point, Bronx, New York City, as a nesting site, and three broods of her young have been banded there by Irving Kassoy. Its mate was banded on May 16, 1938 as 38-644743 and on May 19 the five young were banded. On June 5, 1938, this female was captured and band 38-644737 added. On July 29, 2939 the bird was again caught on its nest and its five young banded. Only about four months later, December 5, 1939, this bird was again caught on its nest and three other young banded. Apparently the male bird was caught only once.

Two broods within six months seems to be quite unusual. I have been able to find only two references to more than one brood a year. Forbush (Birds of Massachusetts and other New England States, vol. 2, p. 190) says "One brood yearly, sometimes two, in the south." New York City can hardly be called south. Bendire (Life Histories of North American Birds, vol. 1, page 326) gives the following instance: "Mr. F. Stephens informed me that a pair hatched a brood of six young in January, 1885, at St. Isabel, Calif., and that on March 25, the bird was sitting on a second set of eggs." While this was probably the same bird, in the absence of banding it cannot be proved.

Of the thirteen young banded we have as yet heard from only one, 38-644738, of the first-brood, which was found dead on April 29, 1939, at Ambler, Pa., a few miles north of Philadelphia.—MAY THACHER COOKE, U. S. Fish and Wildlife Service, Washington, D. C.

The Age of the Black-capped Chickadee.—In his interesting "Winter Studies of Color-Banded Chickadees" (*Bird-Banding*, vol. XII, pp. 49–67) George J. Wallace concludes that the Chickadee is a "comparatively short-lived species." He seems to base his conclusion on the assumption that the thirteen records of Chickadees known to have lived more than five years, published by me in 1937 (*Bird-Banding*, vol. VIII, pp. 52–65) were all there were in the return files. This series of records represented "only a cursory study of the returns that have been received in the last three years" [1934, 1935, and 1936]. Since the above

article appeared, a hasty check of the returns has been made and at least eighty records of Chickadees that lived to be five or more years old have been found; several were past seven.

Up to July 1, 1940 about 3,400 return records for Chickadees had been received, but it is doubtful whether these represent more than 3,000 birds since many have returned more than once. (To ascertain the exact figure would require an elaborate check.) These records represent the returns from 21,900 birds banded, more than 13½ per cent, which is quite high. The 80 or more birds known to have lived to at least five years of age represents more than a third of one per cent of all the Black-capped Chickadees banded.

Species that attain full adult plumage at the post-juvenile molt, and are banded principally in winter, are unsatisfactory subjects for longevity studies since it is impossible to know the real age of the bird at the time of banding. It is a fair assumption that the individuals that have returned for five or six years were birds of the year when banded, but it has required five years or more to learn that. It can also be assumed that many of the birds that did not return after one or two years had already lived much of their life-span at the time they were banded.

Before banding returns became available, my impression was that six or seven years was considered to be "ripe old age" for wild birds, at least for the Passerines. It now seems that some of the theories on this subject may have to be revised.—May Thacher Cooke, U. S. Fish and Wildlife Service, Washington, D. C.

Observations on Intestinal Worms in a Young Robin, (*Turdus m. migratorius*).—On July 5, 1941, an immature Robin, *Turdus m. migratorius*, was trapped and banded by Beecher S. Bowdish at Demarest, N. J. Since the bird was able to fly, being apparently "on its own" at that time, its age was not estimated, but it could not have been more than about two months old and might not have been more than one. A week later the Robin re-entered the trap and died while being examined, whereupon Mr. Bowdish sent the bird to me for post-mortem investigation.

While the cause of death was not remarkable, being the result of physical injuries sustained in some unknown manner, the incidental finding of five species of intestinal worms in so young a bird was of considerable interest.

Securely anchored to the duodenal mucosa there were about a dozen small Spirurid nematode worms, which in the opinion of Dr. Norman R. Stoll were immature. Throughout the intestinal tract were many mature individuals of a small species of tape worm, while a single large adult tape worm of another species was found in the mid-intestinal region. Several large adult Ascaroid nematode worms were scattered along the entire tract. Finally there were four Acanthocephala near the hindgut, their probosces buried in the mucosa.

The point of chief interest in these findings is that the majority of worms was already sexually mature and producing eggs. Not that it would be surprising to find mature parasites two months—or even one month—after the introduction of larval forms into a definitive host, but the fact remains that this bird must have acquired its internal parasites at a very early stage of its life. What, in fact, was to prevent parasitism from resulting after the very first meal?

With mammals this is not nearly so true, inasmuch as worms—at least—can not be transmitted through direct suckling. But even the tiniest insect, delivered to a newly-hatched Robin, may contain encysted stages of tape worms and Spirurids. Later, when Earthworms are included in the diet, Ascaroid eggs will be conveyed to the fledgling's intestine in the soil contained in the Earthworms. The life history of most Acanthocephala is not surely known, but this group is also disseminated by invertebrate vectors that are eaten by birds.

Infestation of young birds is therefore probably early and multiple in most cases. The fact that death rarely ensues as a direct consequence of such parasitism indicates that even the most fragile fledgling is well equipped by nature to