appear to get along very well, for we have on several occasions taken them in the traps with wings healed and apparently functioning. We have made no attempt to splint and confine insect-eating birds by reason of the impossibility of obtaining for them suitable food."

Studies in the surgical pathology of birds have enormous possibilities not only of developing interesting avian science but of determining practical means of helping the birds.

3016 North Second Street, Harrisburg, Pennsylvania.

GENERAL NOTES

Thrasher Adjusts Life Habits to Physical Disability.—That accident and circumstance may lead a bird to change from the status of summer resident to that of permanent resident is suggested by Brown Thrasher (*Toxostoma rufum*) no. 37-308978. This bird was banded April 5, 1937, at my home near North Little Rock, Ark., and returned for the summers of 1938, 1939 and 1940. Up to 1940, the thrasher left each September, presumably moving south, and other thrashers likewise disappeared from the neighborhood. Early in June of 1940, thrasher 37-308978 was discovered to have the right wing broken. For the rest of the summer it was given food (raw peanuts ground in a meat chopper, or crumbs and fragments of pecan kernels) under the spreading branches of a shrub. The bird remained through the autumn and winter, and at this writing, February 15, 1941, spends most of its time in a tangle of climbing roses close to the house. Several times a day pecan bits are thrown on the ground under the roses, notwithstanding that this free food is a hindrance to the trapping of White-throated Sparrows and Slate-colored Juncos.

That the thrasher stayed for the winter is not to be attributed to helplessness, for by September it was able to fly in a slow and labored fashion. In the first month of its injury, the bird often attempted flight, springing from a low shrub or a brush heap, and invariably it fell to ground after a few feet. It ran long distances across the open lawn, from shrubs jumped to the lower branches of a tree, and by long leaps ascended to the top. On August 10 it was seen to start from a limb about eight feet above ground and sail downward for perhaps 12 feet, and by the end of the month it was making level flights from tree to tree. From that time it made rapid progress, although it has never lost a noticeable awkwardness; and, at rest, the right wing is still drooped and held slightly away from the body. All summer the thrasher had evaded traps, but on November 12 was finally caught, identified and examined. However, little was to be learned of the injury, only that the last joint (wrist) of the wing was twisted out of normal position and immovable.

Before its accident, this thrasher had had a notable history. It not only nested in the same territory for three years, 1937, 1938 and 1939, but with the same mate—no. 37-308979. In the spring of 1940, the thrasher returned late, and alone, to find another pair of thrashers already in possession of the dooryard territory. On the morning of its arrival, April 11, there was much excited singing and smacking, with long flights through the trees. Only one bird sang, the unbanded male of the new pair. His mate, banded on the right tarsus, continually chased, jumped at and pecked at the newcomer, who was banded on the left tarsus and thus marked as a bird of my first season of banding, 1937. Apparent

victors, the pair returned to their nest in a honeysuckle hedge on the front lawn, and a little later I saw the left-banded thrasher feeding on the back lawn. Presently it flew up to a tree and gave the piteous notes of a thrasher whose nestlings are threatened. This brought the pair around to renew the attack, and the two who were believed to be females tumbled to the ground. Facing one another,each leaped forward and up, perhaps a foot into the air, and after a moment one thrasher turned and ran away. This settled the matter, and the left-banded thrasher retired to the back garden area just north of its former territory, and on May 21 was trapped and found to be 37-308978. In the three preceding summers I had not distinguished the old pair as to sex, but from its behavior in the contest with the occupants of the dooryard, now believed this bird to be the female; the old male never re-appeared. In the north territory thrasher 37-308978 probably took a new mate and reared one brood before the accident to its wing. Due to the size and type of this area, and the confusion of neighboring thrashers coming in for water, an accurate check was not possible.—Mrs. Rowland Thomas, Route 3, North Little Rock, Arkansas.

Song Sparrows Apparently Mated for Four Seasons.—On July 20, 1937 an adult Eastern Song Sparrow (*Melospiza m. melodia*) was trapped. Because of its small tarsi, a No. 1 band (37-87678) was attached. One week later, on July 27, 1937, another adult was captured in the same trap, and a No. 1A band (37-161846) was attached. During the intervening time three immature Song Sparrows had been captured as well as two other adults, all of which were banded, but none of which has ever been heard from again except as they repeated during that summer.

July 28, 1938 brought 37-161846 back to my trap as a return, and two days later 37-87678 was also captured. Three immature Song Sparrows were also trapped, but not even one single adult.

While trapping in exactly the same locality, I captured 37-87678 as a Return-2 on July 11, 1939, and on July 15, 1939, 37-161846 entered the same trap, also as a Return-2. On this occasion two other adults were trapped, but no immature birds were taken.

My trap was set in the same spot again last summer. On July 26, 1940 it held a single unbanded adult Song Sparrow. The following morning I found three Song Sparrows in it. One was another unbanded adult, but the other two were 37-87678 and 37-161846. They had returned together for the fourth consecutive summer, this time to be captured simultaneously.

Whereas I had no opportunity to study the activities of these two birds intimately, and have, therefore, no proof that they were mates, the observations that I was able to make certainly indicate that such was the case. All of these observations were made in Millbridge, Maine.

In passing, it might be noted that here is an example of the successful use of two different band sizes on the same species of bird.—G. Hapgood Parks, 99 Warrenton Avenue, Hartford, Connecticut.

NOTES ON TECHNIQUE

A DEVICE FOR OPENING SMALL BIRD BANDS

A good deal of time can be saved in banding large numbers of animals if, instead of opening each band on the spot, one has a supply already opened. Bookkeeping can be simplified if separate series of bands are used for the two sexes. With these two points in mind the apparatus described below (Figure 1) was devised for use in banding large numbers of bats and Chimney Swifts. Although this system involves equipment somewhat more elaborate than the conventional pliers or spreading stilleto, it is easily made, does not get out of order, and takes up little space in one's banding kit. With it one can spread 500 bands in an hour or less. Dimensions given are for band size no. 1, but by altering the measurements the apparatus could be adapted for use with sizes 0 and 1A.