ment, but if commercially made, the bottom and edges of the taking doors might well be reinforced with about a 12-gauge galvanized iron wire. One hundred linear inches of this wire cloth, costing approvimately one dollar, are sufficient to make the trap.

For the tripping mechanism reference is made to "Bird Banding Notes" No. 10 and to a line drawing on the opposite page. The writer has found that a small twig, composed of several forks, makes a satisfactory perch and reduces the chance of a bird entering the trap without alighting on the trigger.

The use of the trap is simple. A bird bath some 10 to 12 inches in diameter is placed on the ground in the trap. A tripod composed of bean-poles, seven or eight feet long, is erected over the trap, to which is suspended a water-can. The writer uses a five-gallon kerosene-can which has a faucet by means of which the drip can be regulated. Mr. R. H. Howland who apparently developed the use of dripping water, makes a small hole in the can by means of a nail into which is inserted a peg. By twisting and wiggling this peg the drip can be regulated. Mrs. C. L. Whittle uses a piece of rubber tubing, 3/16" in diameter, purchasable at any drug-store, with a small clasp, which adjusts the water-supply and siphons it at the rate of 60 drops per minute into the bath.[1]

It is obvious that the trap should be located in or near suitable foliage frequented by Warblers and should be so placed that some convenient lighting perch or twig is directly in front of and somewhat higher than the opening in the trap.

NOTES ON MEASUREMENTS OF BANDED BIRDS

BY GLEN D. CHAMBERLAIN

THE writer hopes that the amount of interest in measurements of live birds will serve as an excuse for publishing the preliminary data contained in this article. An outline of my operations will be necessary before the results become fully clear to the reader.

[1] For adjusting the water-flow a wooden clothes-pin, closed by a spring, is found satisfactory. The water-supply is kept in a bucket or an earthen-ware container placed on a block of wood, some fifteen inches high, located close beside the trap. Thirty inches of rubber tubing are sufficient to meet requirements. For the bath a flower-pot saucer is used. The cover to a pickle-jar may be substituted. There should be a space about the bath on the ground for the birds. No food is used in the trap. Purple Finches, Song Sparrows, Chebecs, and even the Kingbird, are readily captured. The cost of the trap itself, including the tubing, is about one dollar and twenty cents.

During the spring of 1924, banding operations, which were under the direction of Dr. Alfred O. Gross, at Brunswick, Maine, yielded slightly over fifty birds. The greater part of the season, however, was occupied in acquiring a technique which would assure definite results. Of the fifty birds banded thirteen were measured, and on eight of these I made temperature determinations. In several cases failure to obtain the temperature measurements was due to inexpert handling. I was a novice at the game and frequently the bird escaped while being measured. I soon learned the advisability of taking the temperature first.

In other cases the birds had remained so long in the trap that I considered it best to release them directly after banding. Incidentally, I might here call attention to the warning of the Biological Survey, that automatic traps should not be used where the operator is not able to give the traps considerable attention. Drop-traps require more time at the trap, but they seldom cause damage to the bird, while the man on the end of the string gets a "kick" which is lacking in the automatics.

Trapping during 1925 is being carried on at Easton, Maine, a town situated in the St. John River basin. To date thirty-five birds have been trapped. Of these fourteen were measured and temperatures of ten more were taken, an improvement in technique as compared with 1924. When the work was gathering impetus, tragedy applied the brakes. Red squirrels are all too numerous in this part of the country, and I had done away with five, when the sixth entered the trap to avenge his tribe, killing three Song Sparrows and one White-throated Sparrow. My time does not permit the operation of a drop-trap, so I am compelled to be satisfied with banding nestlings, which is second best. I expect for the present to have only a meagre amount of material to work on. Over eighty percent of all nests found (excluding those of Crows) have been robbed, presumably by red squirrels. The remaining twenty percent is comprised of but three tree nests, three hole nests, and four Vesper-Sparrow nests, the latter wisely located in the middle of fields.

I hope soon to be able to concentrate on this problem without interruption; then, perhaps, I shall obtain sufficent data to justify reliable conclusions.

As to method, both under-wing and anal temperatures were taken. The former method smacks of the slipshod and this becomes obvious in the results; it is not dependable. The latter method is vastly the better, though the ordinary clinical

thermometer is not practicable for birds smaller than the Song Sparrow. If a smaller-bulb thermometer is procurable, I do not know of it.

In one case, there was a 5-degree difference between under-wing and anal temperatures. In another case, however, the second highest temperature was under-wing. It is difficult to place the thermometer under the wing at the spot where the true temperature can be secured; hence the independability of the method.

The results secured are tabulated for those interested as well as the casual reader. The observation that the Robin seems to possess the highest temperature would be of greater value if I had been able to gather data from more of the species. Bear in mind, however, that this species is more highly organized than any other on the list. The fact that she was incubating possibly introduces a factor requiring investigation in that her temperature may have been abnormally high.

Temperature Determinations

(The same bird was seldom worked a second time. Both methods were tried once on one bird with a five-degree difference. Subsequent takings never differed over one degree.)

	Number Individuals Measured	Minimum Temperatures	Maximum Temperatures	Average Temperatures
Robin	2	107.5*	111.0*	109.25
White-throated Sparrow	3	100.5†	110.2*	107.4
Chipping Sparrow	4	104.8†	108.4†	106.35
Cowbird	2	105.0*	106.5*	105.75
Song Sparrow	5	100.2†	107.8*	104.72
Savannah Sparrow	2	101.0†	103.0†	102.0

* Anal.

† Under-wing.

The following table has been prepared in order to show measurements of live birds compared with the same measurements obtained from bird-skins as given in Chapman's "Handbook of Birds," Revised Edition. Measurements are given in centimeters; weights in grams.

BIRD MEASUREMENTS

	Song Sparrow	White-throated Sparrow	Savannah Sparrow	Cow-bird	Chipping Sparrow	Robin	Chim-ney Swift
Extent of wings	21.05	20.80	22.00	32.60	21.70	38.50	29.70
Wing	6.50	6.93	6.70	11.05	7.02	12.50	12.50
Length	15.80	16.76	13.40	19.50	13.10	22.80	.....
Bill	1.26	1.13	1.00	1.60	0.84	2.00	0.50
Eye to bill	1.53	1.53	1.40	1.95	1.30	2.60	1.30
Nostril to bill	0.97	0.90	0.80	1.15	0.70	1.20	0.30
Diameter of eye	0.50	0.55	0.50	0.40	0.40	0.80	0.60
Tarsus to toe	4.40	4.63	4.00	3.35	3.26	6.50	1.80
Tail	6.66	7.00	4.90	8.15	6.02	10.50	3.50
Weight	.....	.....	.....	47.60	14.64	82.00	13.00
Temperature	104.72	107.40	102.00	105.75	106.35	111.00	.....
No. measured	4	3	1	2	5	1	1

CHAPMAN'S MEASUREMENTS (made from dried skins)

	Song Sparrow	White-throated Sparrow	Savannah Sparrow	Cow-bird	Chipping Sparrow	Robin	Chim-ney Swift
Length	16.00	17.10	14.40	20.10	13.60	25.40	13.79
Wing	6.40	7.34	6.65	10.77	6.96	12.60	12.50
Tail	6.66	7.26	5.30	7.70	5.80	9.80	4.80
Bill	1.24	1.11	1.00	1.70	0.90	2.10	0.38[1]

[1] From nostril.

Easton, Maine, June, 1925

NOTES ON SWAMP SPARROWS

BY EDWARD GOULD ROWLAND, M. D.

On August 13, 1924, I trapped in Belchertown, Mass., an immature and rain-soaked sparrow with a faintly striped breast, and I reported it as a Song Sparrow. During the next forty-two days it repeated six times. On one of these occasions, when it was more fully developed and dried off, I discovered it to be a Swamp Sparrow (*Melospiza Georgiana*).

On September 1, 1924, I trapped and banded a partially-feathered sparrow of a species unknown to me, whose most noticeable markings were the shining silvery edgings of the bends of the wings. Plumage-development by the time of its