

**An Improved Bird-skin for Class Use.**—Those who have taught ornithology, either as a part of general science courses in the public schools, or more formally in university classes in zoology, are likely to have been impressed by the better results obtained when students are permitted to *actually handle* specimens. More or less distant observation merely of mounted birds, on fixed perches, does not bring so easily an acquaintance with the diagnostic characters of species as comes with the more intimate examination of specimens "in the hand."

At the same time, the instructor is often disturbed by the disastrous results of handling, on the part of inexperienced persons, of the usual type of study skin. Smooth, well-made skins quickly become ruffled; white plumages become finger-soiled; and wings, legs, and heads get broken off.

Receipt at the Museum of Vertebrate Zoology of some foreign-made bird skins, "on sticks," suggested to me that here was a way of insuring a more substantial style of study skin than I had heretofore used in class work. Following up the idea, when I was on a field trip last summer I took occasion to develop the "stick method" of making bird skins, with results now described, and illustrated in the accompanying figure.

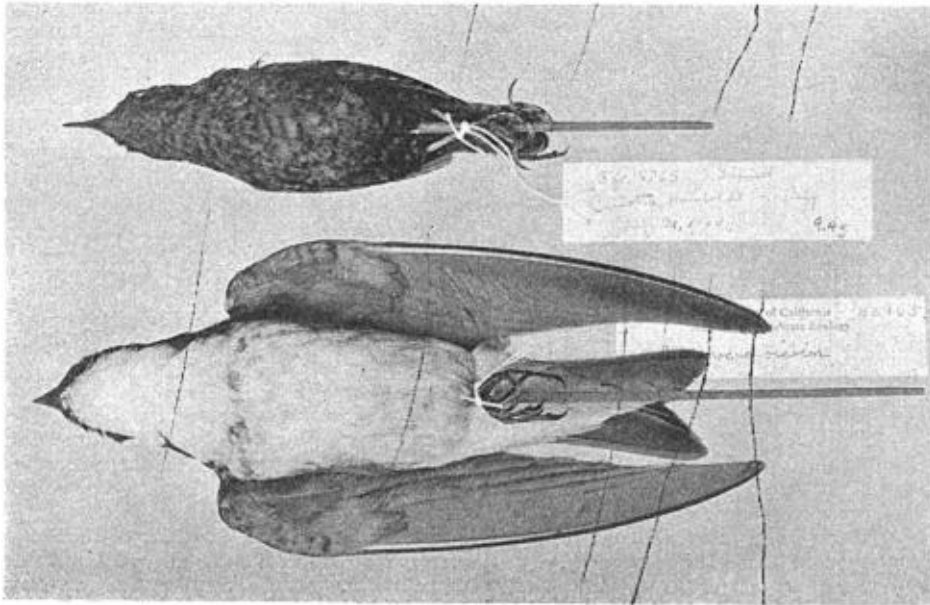


Fig. 39. ILLUSTRATING THE "STICK METHOD" OF MAKING STUDY SKINS OF BIRDS.

The sticks used were split from a section of bamboo which I got at a Japanese florist's shop. The length of the stick for any particular bird need not be determined at an early stage in proceedings; but it should be cut decidedly longer than seemingly necessary, and be shortened to the appropriate length after the skin is stuffed. Very slender bamboo slivers are light and still very stiff and strong. Very good substitutes for bamboo, at least for small birds, are the neatly rounded wooden "applicators," purchasable cheaply at a druggist's.

Most study skins of the conventional type have the wings folded close against the sides, thus obscuring the wing structure, and also concealing special markings which are often present and which may be important in field identification. Therefore, some or most of the specimens put up for class use should be prepared with wings out at the sides, though not necessarily fully spread. To hold the wings securely from being broken off, I tied the two humeri together inside the skin across the back with thread.

For the stuffing, I prepared two soft wads of cotton, of size appropriate to the specimen in hand. With the skin on the back I placed one wad in the body cavity on top of the tied humeri; then I wrapped with cotton one end of the bamboo sliver to a diameter to fill out the neck, and inserted it through the neck between the lower jaws and firmly into the mouth, the mandibles having been previously tied shut by a thread sewn through the nostrils.

Then I placed the second cotton wad on top of the body stick, and, after the usual adjustments, sewed up the ventral incision completely, in such a way that the stick protruded backwards in a perfectly symmetrical median position, its exit from the body being about at the vent. The legs were then crossed on top of the stick (as the bird lay on its back), and the thread tied tightly around both the legs and the stick simultaneously. This thread was, by the way, that attached to the permanent label bearing the full data.

The length of the stick, backward beyond the tips of the tail and wing quills, was determined on the basis of its employment as a handle—not too long and not too short. The bird, if with wings spread, was then put in position on a drying board, without wrapping, symmetry being assured by much smoothing and by the use of pins. In the case of a specimen with the wings folded against the sides, I wrapped the bird in split wadding, just as I usually do with the ordinary style of study skin.

After thorough drying, I find specimens prepared as above to be exceedingly firm, promising much longer "life" and especially much greater ease of handling than with the usual type of skin. The stick enables one to twirl the bird, without touching any of the feathers, so as quickly to see any of the superficial characters looked for.

The trouble involved in making this improved type of study skin is very little more than that ordinarily expended. To put up one small bird took me thirty minutes; and I am sure that with practise I could better this rate of output. I am so positive of the advantages of the stick method that I am having a collection of common species prepared in this way for university class use. Since, I am told, this type has been common in European collections for a great many years, I have no doubt that experience there has shown its value. Even for purely research purposes I believe skins "on sticks" are superior. There would be fewer dilapidated specimens in museums if this method had been more commonly in vogue in the past.—J. GRINNELL, *Museum of Vertebrate Zoology, University of California, Berkeley, September 27, 1923.*

**The Sabine Gull in Oregon and on the Lower Yukon.**—On September 4, 1904, while I was collecting material for the Oregon Agricultural College, a small dark-headed gull was noticed perched well out in Yakima Bay, upon some almost submerged sea drift. It was collected, when it proved to be a Sabine Gull (*Xema sabini*). This specimen is now no. 196, in the O. A. C. Museum collection.

Four years later, this attractive little gull was again met with, this time in its summer home on the lower Yukon River, Alaska. Here, and well out into Bering Sea, its appearance was striking, even to the casual observer, on account of its dark head and black markings on the tips of the outstretched wings.

At St. Michael, Alaska, two specimens were taken, which are now in the Museum of the State College of Washington, with the following data: Adult male, July 30, 1908; juvenal female, August 4, 1908; both collected by Wenrich and Shaw.—WILLIAM T. SHAW, *Pullman, Washington, January 22, 1924.*

**Destruction of Inland Nesting Waterfowl.**—Dr. H. C. Bryant, in an interesting paper on "fallacies in game protection," read recently before the Northern Division of the Cooper Club, stated that the "proper kind of protection could only be determined upon and given after the publication of adequate information bearing on the subject." I, therefore, desire to record a few experiences that I have had concerning the killing of birds and the destruction of their nests by predatory animals.

In May, 1906, I spent some time in South Assiniboia, Canada, now Saskatchewan, at a point north of Walsh, known as Many Island Lake. On the mainland of this lake I found many ducks' nests destroyed and the eggs broken and contents eaten by some animal whose tracks resembled those of the coyote. Every nest found on the mainland had been destroyed, while those on the islands a few hundred feet from the shore were unmolested. From the large number of nesting birds on these