Obliteration of the Tarsal Scutella in Accipiter cooperi in Texas.— The daring sallies of this species often costs it its own life, but I have never known it to chase a barnyard fowl through an open window and under a bed, as is recorded[1] of the Goshawk.

December 5, 1893, sitting by my window I heard a scream from my child outside and on looking through the window saw her sitting on a hen-coop with a Cooper's Hawk making repeated swoops at the young chickens in the coop. The child was feeding the fowls through an opening and some of the food had fallen outside; at this the weaklings were picking when the assault was made. The chickens took shelter in the coop and the marauder perched in a lone tree in a field some two hundred yards away. Calling to my son, whose horse was standing saddled at the gate, he rode out and brought down the Hawk as it sought safety in flight.

On taking the bird in hand I at once saw that I had a specimen with *fused tarsal scales*. Having noted Dr. Coues' record[2] that such a state had not been observed in *A. cooperi*, I at once began an investigation by writing to sundry ornithologists in position to have information upon this subject. The result of this investigation goes to show that the word *fusion* is rather out of place when applied to certain Texan examples, as the scales are not only fused but so much obliterated as to be indistinguishable under a hand lens. After I had learned that the lines of the individual scutella were obsolete in at least two specimens I had collected in Cooke County, Texas, I became more pointed in my interrogations, in some instances questioning my correspondents a second time (no doubt to their annoyance) on the subject.

Following are some of the replies as to *fusion* in northern and eastern specimens:—

"None of my other specimens (I have large series) show complete fusion, but in several the divisions between the scales are not at all distinctly marked."—W. B., Dec. 23, 1893.

"I would say that to the best of my recollection I have never seen nor heard of a specimen of *Accipiter cooperi* in which the tarsal scutella were fused."—R. R., Dec. 11, 1893.

"Replying to your inquiry of the 16th the tarsal scutella of adults of *A. cooperi* and *A. velox* are normally fused."—F. M. C., Dec. 22, 1893.

Below I quote some replies relative to the obliteration of the lines marking the divisions between the individual scales:—

"Most of my adult Massachusetts Cooper's Hawks show distinct scales on the tarsus. In one or two they are somewhat indistinct, but in no case quite obsolete."—W. B., Cambridge, Mass., Jan. 24, 1894.

"As I wrote you previously in answer to the same question *Accipiter*

[1] Hatch, Birds of Minnesota, p. 184.

[2] Birds of the Northwest, p. 335.

cooperi NEVER (as far as my observation goes and I have examined many) has "the lines separating the tarsal scutella obliterated."—R. R., Smith. Inst., Feb. 5, 1894.

"We have quite a number of adult *Accipiter cooperi* in the Museum, but none show the fusion of the tarsi so complete as to have the lines of the individual scales *obliterated.*"—H. Nehrling, Milwaukee, Wisc., April 28, 1894.

"*Accipiter cooperi*, No. 756, Collection University of Minn., ♂ ad., Minneapolis, Minn. Scutella of tarsi completely fused but showing distinct transverse markings or furrows where the scales come together. Not fused near the tarso-metatarsal joint."—T. S. R., March 10, 1894.

It will thus be seen that incomplete *fusion* occurs in Massachusetts, *complete fusion* in Minnesota, and *obliteration* in Texas. Mr. Wm. Brewster *implies* obliteration in a specimen I sent him from this region. In my earlier notes my records do not discriminate between *fusion* and *obliteration*, and the specimens (if preserved) have passed from my hands. The following entries are from my notes:—

"Nov. 5, 1885. One shot from my front gate post. Scales of tarsi *fused.*

"March 2, 1887. D. F. Ragsdale shot one with scales of tarsi *fused.*

"Feb. 28, 1889. ♀ ad., Gainesville, Tex., Coll. Wm. Brewster, state of fusion complete; obliteration implied in epistle.

"Dec. 5, 1893. Ad. ♀ shot with tarsal scutella obliterated; moulting rectrices. Coll. G. H. R."

I should state that the *obliteration* in the specimen now in my collection does not extend to the tarso-metatarsal scales.

It would be interesting to know what per cent. of adult specimens from Texas have the transverse lines obliterated. It would be still more interesting to know the *cause* of such disappearance.—GEORGE H. RAGSDALE, *Gainesville, Texas.*

[The variance in the views expressed by Mr. Ragsdale's correspondents seems to depend upon the definition of the term 'fused.' Mr. Ragsdale himself clearly appreciates the difference between 'fusion' and 'obliteration' of the tarsal scales but he evidently did not emphasize this difference in making his inquiries.

In quite young specimens of *Accipiter cooperi* the tarsus is distinctly scutellate, the scales, especially those at the distal extremity of the tarsus, being more or less imbricated.

In adults the scutella are fused on partially anchylosed and the tarsal envelope then becomes entire. In none of our sixteen adult specimens, however, have I observed the complete obliteration of the lines of fusion, or change from a scutellate to a booted tarsus which Mr. Ragsdale reports, though in several examples, notably one from New Jersey, the outlines of the scales are nearly obsolete.—FRANK M. CHAPMAN, *American Museum of Natural History, New York City.*]