

The correct type locality of *Spizella breweri*

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The correct type locality of *Spizella breweri*.—Some years ago, D.D.G. wrote to R.C.B. about the type locality of *Spizella breweri*, given in the fifth and sixth editions of the AOU *Check-list* (American Ornithologists' Union [AOU] 1957, 1983) as “western North America, California, [and] New Mexico = Black Hills, North Dakota.” D.D.G. pointed out that the Black Hills are properly attributed to South Dakota rather than to its northern neighbor. Without comment, North was changed to South in the seventh edition (AOU 1998) of the *Check-list*. More recently, D.D.G. pointed out a passage in Deignan's (1961) account of type material of *S. breweri* that suggests that the locality may actually have been in what is now Wyoming. We have attempted to determine, and state, the correct type locality of this species by tracing the history of statements of this important datum (Table 1). The type locality of a species is the locality from which the name-bearing specimen(s) originated. If no holotype was designated, the type locality encompasses the localities of all syntypes. Under certain circumstances, a stated type locality may be modified (restricted) or corrected (Banks 2004).

Cassin (1856:40) named *Spizella breweri* on the basis of an unstated number of specimens that may have included two previously discussed and figured by Audubon (1839, 1841) as *Emberiza pallida* Swainson, 1832, with which *breweri* was then generally confused (see Ridgway 1901:328). Cassin did not mention a particular specimen or designate one as the type, but indicated “Spec. in Mus. Acad. Philada., and Nat. Mus.

Washington.” As a locality, he gave “Hab. Western North America, California, New Mexico.” Stone (1899) compiled the first list of type specimens in the Academy of Natural Sciences in Philadelphia (ANSP), including in his listing “*Spizella breweri* Cass.” with the data “24,050. Black Hills, Dak. J. K. Townsend. Type.” This can be taken as the designation of a lectotype and the restriction of the type locality. “Dak.” was an abbreviation for Dakota Territory, which at that time included much of Wyoming and Montana as well as the present states of North Dakota and South Dakota (Merriam-Webster 2001). Cassin (1856) noted that *breweri* “is apparently a much more abundant species [than *pallida*], being brought in nearly all collections from California and New Mexico.”

Cassin (1856) began his account of *S. breweri* by noting the two specimens that Audubon had called *Emberiza pallida* Swainson. Those two birds were given by the collector, J. K. Townsend, to Audubon, who later gave them to Baird (Deignan 1961). It is not certain that Cassin had those birds before him; he certainly was aware of them, and he did have many of Townsend's specimens. Nonetheless, those two specimens are listed as types (presumably syntypes) by Deignan (1961) in the U.S. National Museum (USNM). Neither of those birds is the one Stone selected as the lectotype, *contra* Grinnell (1932b).

The third edition of the AOU *Check-list* (AOU 1910) was the first to mention type localities of the included species with the citations to the original descriptions. The preface to that edition lists as a change from

TABLE 1. Chronological listing of statements of type locality of *Spizella breweri*.

Author and date	Type locality
Cassin 1856	<i>Hab.</i> Western North America, California, New Mexico
Stone 1899	Black Hills, Dak.
Ridgway 1901	California; New Mexico
AOU 1910	Black Hills, a few miles west of Fort Laramie, Wyoming
AOU 1931	California and New Mexico
Grinnell 1932a, b	Black Hills, South Dakota
Hellmayr 1938	“Western North America, California, New Mexico” (type, from Black Hills, North Dakota)
AOU 1957	Western North America, California, New Mexico = Black Hills, North Dakota
Miller et al. 1957	Western North America, California, New Mexico; type from Black Hills, North Dakota
Paynter 1970	Western North America, California, and New Mexico; type from Black Hills, North Dakota, <i>vide</i> Stone 1899
AOU 1983	Western North America, California, and New Mexico = Black Hills, North Dakota
AOU 1998	Western North America, California, and New Mexico = Black Hills, South Dakota
This letter	Western North America, California, New Mexico = Black Hills, Dak[ota Territory] = Laramie Range, Albany County, Wyoming

previous editions that "the type localities of species and subspecies are given as indicated by the original author." In the *Check-list* (p. 264), the type locality of *S. breweri* is given as "Black Hills, a few miles west of Fort Laramie, Wyoming." This is considerably different from the "Hab." statement given by Cassin (1856) and significantly expands the locality given by Stone (1899). In the narrative of his travels, Townsend (1839) mentions "a range of high and stony mountains, called the Black Hills" on 1 and 2 June 1834, when he was traveling west from Fort Laramie and just before reaching the north fork of the Platte River. Francis Parkman's journal of 1846 also mentions the Black Hills as a mountain range just west of [Fort] Laramie, identified as the present Laramie Range by E. N. Feltskog in Parkman (1969). The statement by AOU (1910), obviously based on Townsend's narrative (see Deignan 1961:639, 655), may be taken as further (and correctly) restricting the type locality of *S. breweri* as given by Stone (1899). Note that the Laramie Range is to the west of old Fort Laramie, but east of the present city of Laramie.

In discussing type localities, the preface of the fourth edition of the *Check-list* (AOU 1931:xi) states:

we have attempted to quote all type localities verbatim...and have added a restricted type locality, following some previous revisor where such has been found. The definite restriction of a broad type locality is very necessary since when an old species is subdivided into races [or split into two or more species] we must be sure that we have relegated the old name to the proper race.

However, the type locality of *S. breweri* was given (AOU 1931:349) simply as "California and New Mexico." This seems unaccountably simplified, considering the stated reasoning for specifying restricted type localities just quoted, because this seems to be the first publication in which *Spizella taverneri* Swarth and Brooks, 1925 is listed as a subspecies of *S. breweri*.

In a work certainly well under way while the fourth edition was in its final stages, Grinnell (1932b:323) discussed Cassin's type locality of *S. breweri* and the statement that the species was "brought in nearly all collections from California and New Mexico." Grinnell said, "This has been interpreted [by whom was not stated] that a true type must be selected from among the California-taken specimens then extant." However, Grinnell (1932b) reluctantly followed Stone (1899) "in considering the type locality of *S. breweri* to be Black Hills, South Dakota," though Stone had merely indicated "Dak."

Grinnell (1932a) was the first formally to merge *S. taverneri* with *S. breweri* and to provide a rationale (apparent intergradation of characters in birds of the northern United States) for doing so. In this action, Grinnell (1932a:232) stated that "The type locality of *Spizella breweri* Cassin is probably now satisfactorily established as the Black Hills, South Dakota," citing

Stone (1899) and Grinnell (1932b), again ignoring the further restriction of AOU (1910).

In an extensive annotated synonymy of *S. b. breweri*, Hellmayr (1938:561) repeated the full "Hab." statement of Cassin (1856) and noted "type, from Black Hills, North Dakota," citing both Stone (1899) and Grinnell (1932b). How and why Hellmayr put the Black Hills in the wrong Dakota must remain a matter of conjecture. Hellmayr's form of citing the type locality, a statement from the original description equated with a more precise locality if possible, was essentially adopted for the fifth edition of the *Check-list* (AOU 1957:615), as was the erroneous statement for *S. b. breweri*. The statement was then copied for the sixth edition (AOU 1983:701). It was also used by Miller et al. (1957:389). Paynter (1970:85) also cited Stone (1899) but followed Hellmayr and other authors in placing the Black Hills in North Dakota.

It seems that the third edition (AOU 1910) of the *Check-list* cited the type locality of *Spizella breweri* as accurately and correctly as was possible at that time. Changes after that have simplified or have introduced errors. We recommend that future statements of the type locality of this species reflect an updated version of the 1910 statement: Western North America, California, New Mexico = Black Hills, Dak[ota Territory] = Laramie Range, Albany County, Wyoming.

Despite Cassin's statement about the relative (to *S. pallida*) abundance of *S. breweri* and its predominance in collections coming from the west, specimen 24,050 seems to have been the only one of the species at the ANSP in 1856. A printout of current holdings of *S. breweri* in the Academy lists none other with as low a catalogue number, and the next date of a specimen is 1895. However, 24,051 and 24,052 are catalogued as *Spizella pallida*. They were collected by E. Harris, a friend and colleague of Audubon, on the upper Missouri River, probably at Fort Union, the type locality of *Emberiza shattucki* Audubon = *Spizella pallida* Swainson, the type of which is now in the USNM. One must assume that they found their way from Audubon to Cassin along with 24,050. Perhaps the two USNM specimens of *S. breweri*, originally identified as *S. pallida*, listed as types by Deignan were also with them. All this makes one wonder about Cassin's original concept of *Spizella breweri*.

What have we learned from this? First, that most modern statements of the type locality of this species, and perhaps of most avian species, are copied from a previous presumably authoritative source—in this instance, Hellmayr (1938) or a recent AOU *Check-list*. Second, authoritative sources can be wrong. Third, one who states an important datum should check the original source but must search also for valid corrections and restrictions. Fourth, authors (including compilers of check-lists) do not always do what they state they intend to do. These lessons apply not only to

type localities but also to other important bits of data—dates, page and volume numbers, spellings, etc.

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Philopatry: A return to origins.—The word “philopatry” is a combination of the prefix *philo* (from the Greek *philos*, “beloved”) and the Latin *patria*, which means “fatherland” or “homeland.” Since the first English-language use of “philopatry” in an ornithological context by Huntington (1951), the term has been applied to two types of site-faithful behavior in birds. Closest to the etymological meaning is the first, “natal philopatry,” which means not dispersing far from, or returning to, a birthplace for reproduction. The second is “breeding philopatry,” which means returning to the same breeding area each year, though that area may not be an individual's birth place (Shields 1982, Anderson et al. 1992). Therefore, any assessment of breeding philopatry likely includes some immigrant individuals, whereas assessments of natal philopatry include only locally hatched or born individuals.

In the past several years, the use of philopatry in the ornithological literature has widened further, to include site fidelity to nonbreeding areas, such as sites used for molting (Iverson et al. 2004), wintering (Robertson and Cooke 1999, Mehl et al. 2004), or stopover during migration (Merom et al. 2000). Use of the term “philopatry” to describe not only natal