Common Name: BACHMAN'S SPARROW

Scientific Name: *Aimophila aestivalis* Lichtenstein

Other Commonly Used Names: Pine woods sparrow, piney woods sparrow

Previously Used Names: *Fringilla aestivalis*

Family: Emberizidae

Rarity Ranks: G3/S2

State Legal Status: Rare

Federal Legal Status: Not listed

Federal Wetland Status: N/A

Description: The Bachman's sparrow is about 15 cm (6 in) in length with a long rounded tail. Adult birds have alternating reddish-brown and gray vertical stripes running down the back from the nape of the neck to the top of the rump. A reddish-brown cap is found on the top of the head and a thin reddish-brown stripe runs from the back of the eye to the nape. The cheek, throat, and upper breast are buff to grayish. The lower breast and abdomen are lighter buff to whitish. Wing

and tail feathers are reddish-brown. Legs are yellow to brownish-gray in color. The bill is grayish to dull grayish-brown.

Similar Species: The Bachman's Sparrow could be confused with the rufous form of the field sparrow and the immature swamp sparrow. The field sparrow differs by having a very distinct white eye-ring, pink bill, white wing bars, and reddish-brown and black stripes on the back rather than reddish-brown and gray stripes. Immature swamp sparrows will have black and brown striping on the back that does not extend up the neck, a thin dark stripe behind the eye that does not extend to the nape, and a whitish chin with a thin black malar (mustache) stripe. Field sparrows often use some of the same microhabitats as Bachman's sparrows while most often swamp sparrows inhabit damp or wet brushy areas in fields and open woods.

Habitat: Mature open pinewoods, regenerating clear-cuts (both pine and hardwoods), utility rights-of-way, and old pastures with a dense ground cover of grasses (particularly wiregrass, bluestem, or broomsedge) and forbs, or palmetto scrub. This sparrow is often associated with open, mature pine forests where red-cockaded woodpeckers are found, since this habitat often provides the thick grassy ground cover this sparrow prefers. However, it will be lost from sites well before red-cockaded woodpeckers where burning is not frequent enough since it does not tolerate encroachment by hardwood trees and shrubs as readily as does the red-cockaded woodpecker.

Diet: Invertebrates, including beetles and weevils, grasshoppers, Lepidoptera, crickets, millipedes, snails, and spiders; seeds of grasses (especially *Panicum*), sedges, and some forbs gleaned from the ground surface.

Life History: The Bachman's sparrow is secretive and shy most of the year and due to its habit of stealthily running on the ground through dense cover it is difficult to see. Territorial singing by males may start as early as February in the Coastal Plain and often continues through the summer. Singing activity declines as nesting progresses, though later increases as subsequent nesting attempts are made. Males will sing from the ground, low shrubs, and the lower branches of pine trees. Their very distinctive song is a series of whistles and trills. Nesting usually starts in April and can last through August. The female lays 3 or 4 eggs (range 2-5) in a nest she constructs at the base of a grass clump, small shrub, or pine seedling. The nest, made of grasses, forbs, and rootlets, is usually domed. Eggs take 12-14 days to hatch and fledging occurs 9-10 days later. The female does all of the incubating and brooding. Both parents feed the young. Within 3 weeks to a month after fledging, the young disperse from the natal area. This species will usually have two, and possibly three, broods per year.

Survey Recommendations: The best survey method for this species is listening for singing males as they advertise their territories. Point counts along transects, such as roads, can be very effective. Territorial singing is most consistent during the first three hours after sunrise on sunny days from March through June. The use of song/call playback can be effective throughout the year in good habitat where this sparrow may remain territorial year round.

Range: Found throughout much of the southeastern United States, this species was once much more common and widely distributed within this region. In the late 1800s and early 1900s,

populations expanded northward, probably in response to creation of suitable habitat conditions as forests were cleared and farms abandoned and it could be found as far north as southwestern Pennsylvania, southern Ohio, Indiana, and Illinois. In Georgia this bird is primarily found in the Coastal Plain with scattered sites across the southern Piedmont and occasional reports from the northern Piedmont and mountains.

Threats: The Bachman's sparrow has become increasingly rare with changes in agriculture and forestry. Much of this decline is probably due to conversion of grassy fields to row crops or intensively grazed pastures, fire suppression in forested habitats, and dense stocking of pine seedlings when replanting. Continued expansion of these practices to areas of suitable habitat will lead to further reduction of Bachman's sparrow populations.

Georgia Conservation Status: Major concentrations occur at quail plantations in the Red Hills region, at Joseph Jones Ecological Research Center, Ft. Benning, Ft. Stewart, Piedmont and Okefenokee National Wildlife Refuges. Additional populations are found at Dawson Forest, Yuchi, Di-Lane, Clarks Hill, Tuckahoe, Rum Creek, Chickasawatchee, Mayhaw, River Creek, and Silver Lake WMAs and Fall Line Sandhills and Doerun Natural Areas.

Conservation and Management Recommendations: Population trends in Georgia are difficult to ascertain because this bird is encountered on very few Breeding Bird Survey routes and in very low numbers. Populations in the Southeast showed a statistically significant decline of 7.1 percent per year from 1966 to 1979. A 1.5 percent annual decline was documented from 1966-2007; however, this trend was not statistically significant. Partners in Flight has designated this bird an extremely high priority species warranting conservation attention. Generally, Bachman's sparrows are found in older pine stands (60-plus years) with widely spaced trees; however, maintaining lower basal areas within younger stands can provide suitable conditions for grass and forb growth, and consequently for this sparrow. Regular burning is needed in pine woods habitats, and often in fields, to control shrub and sapling growth that would inhibit herbaceous ground cover. A burning cycle of 2-3 years in pine woods habitat will usually give the best results. Managers on private timberlands can provide suitable habitat by thinning and burning middle-aged pine plantations. Clear-cuts that are not too densely restocked can also provide suitable habitat for several years after planting.

Research conducted in loblolly pine plantations in the Piedmont suggests that Bachman's sparrows only use larger (>90 acre) stands that are very young (2 year old). Due to the rapid growth of these pines the canopy quickly closes leaving a very limited temporal window where the habitat is suitable for this species. In comparison, regenerating longleaf pine habitat usually remains suitable for several years and Bachman's sparrows are able to use much smaller stands. This difference seems to be a function of tree structure, as young longleaf pines shoot up in a "rocket phase" were there is with very little lateral growth, allowing for a much longer window before canopy closure and a denser ground cover of grasses and forbs. Additionally, young longleaf pines can be burned much sooner after establishment than loblolly or slash pine.

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