

# BREEDING SEASON HABITATS OF THE GOLDEN-CROWNED KINGLET IN THE SOUTHERN BLUE RIDGE MOUNTAINS

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The Golden-crowned Kinglet (*Regulus satrapa*) occurs through much of Canada, the northern United States, and down the Appalachian highlands to the southern limit of its breeding range in the mountains of western North Carolina (A.O.U. 1957). Pearson et al. (1959) state that the bird breeds on "some of the higher mountains" but they give no details of habitat selection. In the southern Blue Ridge Mountains, the species occurs during the summer months in three distinct types of coniferous forests.

1. *Spruce-fir forests.* The majority of kinglets inhabit the forests of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) at elevations above 1372 m (4500 feet). The species is well documented as a common summer resident in the Great Smoky Mountains (Stupka 1963); northern Great Balsam Mountains, Plott Balsam Mountains, southern Great Balsam Mountains, Shining Rock Ledge, Blue Ridge Mountains, and Nantahala Mountains (Simpson, present study); Black Mountains (Simpson 1972a); Grandfather Mountain (Pearson et al. 1959, Alexander 1973); Roan Mountain (Fred Behrend, pers. com.; Simpson, present study); the Mt. Rogers-Whitetop area of Virginia (Murray 1952; Simpson, present study); and apparently at Cone Lake, Watauga County, N.C. (Murray 1946). Breeding reports have been obtained in the Smokies (Stupka 1963), Black Mountains (Burleigh 1941), and Grandfather Mountain (Pearson et al. 1959); while breeding season densities have been reported by Adams (1959) and Alsop (1970).

2. *Hemlock forests.* The eastern hemlock (*Tsuga canadensis*) is a common forest tree throughout the southern Blue Ridge, where it often occurs as a major dominant in sheltered ravines and moist slopes. Golden-crowned Kinglets have been reported as fairly common summer residents in this forest type at 1220 m (4000 feet) on the Highlands Plateau, Macon County, N.C. (Stevenson 1941; Johnston 1964; Simpson, present study). I have noted one to two pairs at 1097 m (3600 feet) in the hemlock stand along Sim's Creek near the Blue Ridge Parkway in Watauga County, N.C., on numerous occasions during the months of June and July. In late June 1970, I noted a pair of kinglets in the hemlock woods at 1220 m (4000 feet) in the Craggy Mountain Scenic Area, Carter Creek, Great Craggy Mountains, Buncombe County, N.C. I am unaware of any breeding density studies or nesting evidence from this type of habitat.

3. *White pine forests.* The white pine (*Pinus strobus*) is widely distributed in the southern Blue Ridge, where it may form solid stands in some locales. At Highlands, Macon County, N.C., Golden-crowned Kinglets have been observed throughout the summer months by Toliver Crunkleton, David Johnston, Thelma Howell (pers. com.), and Simpson (present study) in the mature grove of white pines at 1170 m (3840 feet) near the Highlands Biological Station. A pair successfully fledged three young from a nest in a Norway spruce located within this area in June 1951 (see Simpson 1972b), and this spot marks the presently known southern limit of the species in the eastern United States during the breeding season.

## SUMMARY

The Golden-crowned Kinglet inhabits three types of coniferous forests during the breeding season in the southern Blue Ridge Mountains. The majority of the birds occur in spruce-fir forests above 1372 m (4500 feet) while the species also inhabits hemlock stands between 1097 m (3600 feet) and 1220 m (4000 feet). At the Highlands Biological

Station, the bird has also been reported from white pine stands, and this locality is the southern breeding limit of the species in the eastern United States. Observers should be alert to document and report any additional breeding season records of the Golden-crowned Kinglet from western North Carolina.

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