

FROM FIELD AND STUDY

Sympatry of the Jays *Cissilopha beecheii* and *C. san-blasiana* in Nayarit.—Despite their considerable morphologic differences, it has been suggested (Hellmayr, *Cat. Birds Amer.*, pt. 7, 1934:37, footnote) that the jays of the genus *Cissilopha* are conspecific. This suggestion has been supported by Sutton (*Mexican Birds*, 1951:233) and Paynter (*Peabody Mus. Nat. Hist. Bull.* 9, 1955:217). However, Moore (*in Check-list Birds Mex.*, pt. 2, 1957:119, footnote) recently reported non-intergrading specimens of the two western Mexican species, *C. san-blasiana* and *C. beecheii*, taken only 25 miles apart near San Blas, and he maintained, on the basis of this evidence, that they are specifically distinct. Specimens and observations obtained by us in June, 1958, strengthen Moore's contention.

The larger of the two species, *C. beecheii*, has a range extending from the Alamos Faunal District of Sonora south along the Pacific coastal plain of México to Nayarit. The southernmost record is San Blas, reported in 1876 by Sclater and Salvin (*Proc. Zool. Soc. Lond.*, 1876:270); but, presumably because McLellan (*Proc. Calif. Acad. Sci.*, ser. 4, 16, 1927:51) collected only *C. san-blasiana* at San Blas, Hellmayr (*op. cit.*: 39, footnote) claimed that the early record did not apply to the city of that name in Nayarit. *Cissilopha san-blasiana* was reported from San Blas in the 1840's and was found there also by McLellan; there are no reports of its regular occurrence farther north.

On June 21, 1958, we heard three *C. beecheii* calling from a stand of mangroves bordering a narrow estuary one mile south-southwest of the plaza in San Blas. One specimen, an adult male, was taken, after which the others moved off in the mangroves and refused to respond to squeaks or imitations of their calls. The next day an adult female with a brood patch was collected in a similar situation one-half mile northeast of San Blas. This individual and a lone juvenile were engaged in a vigorous dispute with a Pale-billed Woodpecker (*Phloeocastes guatemalensis*). We did not encounter *C. beecheii* again although we hunted along mangrove-bordered estuaries and in other coastal vegetation types. That it is decidedly uncommon at San Blas is further indicated by the fact that most local fishermen and boatmen were completely unfamiliar with it.

We did not find *C. san-blasiana* in the immediate vicinity of San Blas, but it was present in moderate numbers in mixed deciduous-evergreen thickets bordering palm groves and cleared fields and in wooded draws five miles east of town along the road leading from San Blas to the Tepic-Mazatlán highway. Similarly, McLellan (*op. cit.*: 51) noted that "only a few . . . jays were seen about San Blas, and they occupied the higher ground in the vicinity of the Tepic road." These jays stayed well down in dense cover but were easily attracted by owl calls or squeaks. Three specimens collected are typical representatives of the northern race *C. s. nelsoni*, showing no approach to *C. beecheii*. Nor do our specimens of the latter approach *C. san-blasiana* in any way.

Although *C. beecheii* and *C. san-blasiana* have yet to be taken in the same stand of vegetation, their occurrence five miles apart provides clear evidence that they are species. Contact between the two jays at San Blas is limited by low, densely forested hills that lie east of town between the estuary mangrove habitat of *C. beecheii* and the slightly more arid inland situations frequented by *C. san-blasiana*. But undoubtedly the two habitat types are adjacent and the jays in close contact north and south of the hills, which extend only a few miles.

The strict habitat segregation of these jays where they are sympatric is noteworthy. In Sinaloa and Sonora, *C. beecheii* ranges inland to at least 1500 feet elevation (Moore, *op. cit.*: 120), and at Pie de la Cuesta, Guerrero, *C. san-blasiana* occurs in mangroves as well as in vegetation of the type in which it is found at San Blas.

The common flock calls of the two jays are decidedly different. That of *C. san-blasiana* is a series of short, monotone *chat* or *cha* notes; that of *C. beecheii* is more complex and involves changes in pitch.

The two currently recognized subspecies of *C. san-blasiana* apparently differ only in color. Ridgway's claim (*Bull. U. S. Nat. Mus.*, 50, pt. 3, 1904:314) that the tail is "decidedly longer" in the southern race (*C. s. san-blasiana*) requires confirmation. Tail measurements of our adult male and female *C. s. nelsoni* from San Blas are 154 and 153 mm., respectively, and Ridgway gives an average of 153 mm. for three male specimens of the southern race from Guerrero.—ROBERT K. SELANDER and DONALD R. GILLER, *Department of Zoology, University of Texas, Austin, Texas, July 23, 1958.*