

NESTING OF THE ROSE-THROATED BECARD IN ARIZONA

By ALLAN R. PHILLIPS

The northwestern race of the Rose-throated Becard, long known as Xantus' Becard, is now referred to *Platypsaris aglaiae richmondi* van Rossem. This bird has been known to nest as far north as Rancho la Arizona, which is situated some 15 miles west of Nogales in the Altar River drainage of extreme northern Sonora, México. This northern colony, however, was considered by van Rossem (Occas. Papers Mus. Zool., Louisiana State Univ., 21, 1945:143) to be "apparently completely isolated by some 300 miles." The only authentic record of a becard known for the United States is that of a male taken by Price (Auk, 5, 1888:425) on June 20, 1888, at 7000 feet altitude in Ramsey Canyon, Huachuca Mountains, Arizona; this bird is now in the Museum of Comparative Zoology. Therefore, the discovery of at least four pairs of these becards nesting in the Santa Cruz River drainage of central southern Arizona is a most unexpected northward extension of the range of a semitropical species.

On June 19, 1947, along a well-wooded streamside, an immense nestlike object some 40 feet up in the drooping outer branches of a large sycamore caught my eye, and on studying it with binoculars I was astonished to find that it appeared to be the nest of a becard. After a long wait, a male finally appeared high in this tree. He was very quiet and deliberate in his motions, and he remained always in the upper branches, so that it was no easy matter to collect him. He proved to be a first-year bird, in breeding condition, and was the second specimen of becard taken in the United States. The female was not seen that afternoon and probably was incubating inside her nest.

Accompanied by Mr. and Mrs. Anders H. Anderson, I revisited this site on the morning of July 13, 1947. During the half hour that we spent there, the female twice flew to the nest to feed the young, but a new mate that she had secured did not assist her. Later that day Mr. Anderson discovered a second nest about a mile from the first. This was some 50 or 60 feet above ground in the upper, down-hanging branches of a large streamside cottonwood. The male appeared in the branches near the nest, but the female was not seen and was therefore presumed to be incubating in the big, domed structure.

In 1948, within this same mile of river bottom, I located four active nests. On my first visit on May 29, with Dr. Herbert Brandt, we found that the two pairs of the previous year had their homes largely built. On June 19 I secured a third nest with its set of six heavily incubated eggs; Dr. Brandt, who succeeded in preparing them, estimated that these would have hatched on successive days, starting about June 22.

The nest of the Rose-throated Becard is a remarkable affair for such a small bird, being a large, loosely made, cylindrical heap of vegetable material woven about a group of terminal twigs of a high, outreaching limb of a big sycamore or cottonwood, where it can sway freely in the breeze. I have not found any unusual nests like the one reported by Eaton and Edwards (Auk, 64, 1947:466-467) in Nuevo León, México; nor have I noticed a tendency to associate with any other kind of nesting bird, such as oriole or kingbird. The binding material is composed mainly of long strips of inner bark taken from dead cottonwood limbs, interwoven with quantities of grass, leaves, patches of insect webs, rootlets, and other miscellaneous materials. The lining of a fallen nest contained some contour feathers, while in the outer parts may be found occasional quills, mostly of the Band-tailed Pigeon. The nesting cup is well inside the structure.

Nests vary considerably in outside dimensions, ranging from 12 to 25 or 30 inches high (long) and from 10 to 12 inches in general diameter. They may be anything from

spherical to rather pear-shaped in outline, and are placed from 30 to 60 feet above the ground. In the nest collected, the entrance hole went in four inches and then turned abruptly down into the nesting chamber some two inches below. In the completed nest there is only one entrance, usually near the bottom of the trashy-looking mass; but during construction, openings are left in the structure which are closed when the nest is finished. This large abode is by no means firmly woven together, as is the nest of an oriole or vireo, so only occasionally does the home of the becard survive the winter winds.



Fig. 19. Occupied nest of Rose-throated Becard hanging two feet to right of old nest. Nests situated 30 feet above ground in sycamore tree. Santa Cruz River valley, southern Arizona, June 10, 1948.

The huge nest of this small bird can be built with remarkable speed. On revisiting the site one week after collecting the afore-mentioned nest, I found a new structure already more than 12 inches long; this was built about 60 feet up in another part of the same tree, thus being twice as high as the one we had taken. The new nest appeared to be nearly finished, although the birds were not working on it that afternoon, possibly because the weather during this whole period was very hot. Despite the large quantity of material needed for each of the 1948 nests, the nearby old structure of 1947 did not seem to have been robbed of any of its components.

The female appears to perform all the labor of nest construction, although the male usually accompanies her on her flights, and Dr. Brandt twice saw him enter a hole near

the bottom of a nest which was being built. On another occasion a male appeared with a beakful of long cottony pappus, but did not take it to the nest. Consequently I am not altogether sure that the male does not participate at times in actual nest building.

After incubation begins, the female is seldom seen, presumably because she confines herself to her task. In the heat of June 10, 1948, however, Dr. C. T. Vorhies ascertained that a female was continually off her nest most of the early afternoon; since her eggs were heavily incubated when collected nine days later, incubation was probably under way on June 10. I have had no indication that the male participates either in incubation or in feeding the young in the nest.

An interesting feature of the becard's nesting behavior is its apparent desire to build its new home in exactly the same situation that was occupied the preceding year. From photographs taken in 1947, it seems clear that one bird swung its 1948 cradle from the exact spot used the year before, while the other had moved only three or four feet to one side of the situation occupied the previous summer. A third nest in 1948 was only two feet from the old abode, which had survived the winter due to its sheltered position.

The actions of the Rose-throated Becard are very quiet and deliberate. It sits silently upright and remains nearly motionless for long periods of time. Its usual call is a high-pitched squealing *keeer* which is rather long drawn out and descending in pitch; this whistle closely resembles that of the Gray Hawk or "Mexican Goshawk" (*Buteo nitidus maximus*). In fact, the sound might be likened to a sudden escape of steam, although lacking the sharp hissing quality and being instead rather plaintive. I have never heard any notes like those attributed to these birds by Price and Beebe (Bent, U. S. Nat. Mus. Bull. 179, 1942:10), but I have not had the good fortune to observe the becards during courtship prior to nest building. When excited, the male utters another thin, high-pitched call, *chrrr-chrrr-chrrr—quit—quit—quit*. This may be followed by the usual *keeer*.

The Rose-throated Becard is such a quiet mannered, upper-story bird that it is hard to find, unless its nest is seen or its subdued yet piercing scream is heard. Once seen, it would be difficult to mistake for any other bird of the United States. The large head and bill, short neck, and chunky body give it some resemblance to a small tanager; but the dark head, whitish throat, and shorter narrower tail are markedly different, and it perches in the erect attitude of a flycatcher.

The six incubated eggs taken on June 19 were placed in a refrigerator and were weighed six days later. They then ranged from 2.95 to 3.15 grams, averaging 3.06 grams per egg. When fresh, they had probably weighed considerably more. As the male taken a year earlier weighed only 30.35 grams, the clutch of six eggs probably weighed more than 60 per cent of the normal weight of the female.

Because of the advanced state of nests in late May, the Rose-throated Becards must arrive in Arizona not later than the first part of May. They remain the entire summer. On September 14, 1947, Mr. and Mrs. Anderson, Mr. and Mrs. Wm. X. Foerster, and the writer saw a single becard which, judging from traces of red in its plumage, was probably a young male. Thus this Mexican bird resides in Arizona for at least the four hot months.

Acting with commendable promptness, the Arizona Game and Fish Commission placed this remarkable bird on the list of those which may not be collected without a special permit, as of July 1, 1948. With this extra protection, it is hoped that they may increase in their tree-top homes and perhaps continue their northward spread.

Museum of Northern Arizona, Flagstaff, Arizona, February 14, 1949.