

A history of the Key West Quail-Dove in the United States

*An elusive species visits Florida and
inspires this historical review*

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THE RECENT OCCURRENCE — corroborated by thousands of birders — of a Key West Quail-Dove (*Geotrygon chrysis*) at Everglades National Park, Florida, has stimulated interest in the enigmatic history of this species in the United States. In this paper I will review the past occurrences of this species and advance several theories to account for them.

Despite its occurrence as a resident breeding bird on several major islands that have seen considerable ornithological attention, the Key West Quail-Dove remains a little-known bird. This should come as no surprise, however — of the 13-15 species within the genus *Geotrygon*, for only one, the widespread Ruddy Quail-Dove (*G. montana*), is there more than rudimentary life history information known (see Skutch, 1949). Currently authors (Bond, 1956, 1971; Goodwin, 1970) cite the range of the Key West Quail-Dove as the Bahamas and the Greater Antilles, excepting Jamaica. Bond (1956) states that it is "of accidental occurrence on Key West", but cites no other extralimital records.

The species is most frequently encountered in dry lowland forest and scrub, often on limestone, but has also been found in "impenetrable tracts of coppice" (Brudenell-Bruce, 1975), "dry upland woods . . . and . . . thick forest of the limestone hills" (Barbour, 1943), and even on cayos within the Zapata Swamp (Barbour, loc.cit.). Wetmore and Swales (1931) also encountered it in ". . . areas with considerable rainfall" up to 500 m elevation.

Like other members of the genus, *G. chrysis* inhabits the forest floor where it feeds on seeds, fallen berries, insects and

other invertebrates (Goodwin, 1970). My own experience with the species in Puerto Rico is that it prefers dense woodlands of rather thin-boled trees and where the herb layer is not well-developed, although there often is a shrub layer of varying density. Because of the latter, one sometimes must squat near the ground to obtain adequate views of the bird. It is noteworthy to mention, in light of the 1979 individual, that Key West Quail-Doves are not infrequently found in paths, lanes, and clearings (Goodwin, 1970; Brudenell-Bruce, 1975; pers.obs.). Nesting extends from February to June (Barbour, 1943; Wetmore and Swales, op. cit.), although territorial calling may continue into September (Brudenell-Bruce, op.cit.).

Considered shy or even elusive by most observers, ". . . it usually walks or runs away from the intruder and takes flight silently upon reaching open space" (Brudenell-Bruce, loc.cit.). However, I believe that much of the difficulty in observing the bird stems from the physiography of its habitat — the close spacing of the trees, the low light levels, and the thicketlike shrub layer. Like others of the genus I have flushed, it seldom flies far and usually alights on a low branch or fallen trunk from which it surveys the scene. By remaining still, the observer can then watch the bird as it descends to the ground and goes about its normal activities.

NOT SURPRISINGLY, AN ACCURATE assessment of the status of *G. chrysis* is problematical and much of the available information must necessarily be drawn from older accounts. Goodwin (op. cit.) summarizes the opinions of

most authors by stating that the bird is "now rare in most parts of its range" From the standpoint of United States records, the species' status in the Bahamas and Cuba are of most concern, for these countries lie approximately 77 km from West Palm Beach and 160 km from Key West, respectively. Unfortunately there exists no modern, comprehensive treatment of Bahamian birds. A recent field guide (Brudenell-Bruce, op.cit.), based primarily on observations made on New Providence, gives the status of *G. chrysis* as a fairly common resident on that island, but merely indicates its presence on four others.

The situation on Cuba has had better documentation. Barbour (1923, 1943) expressed concern for the species there, due to the widespread deforestation of the lowlands. He states: "Nowhere abundant, indeed a rather rare bird throughout its considerable range, the Key West quail dove is one of the species which sooner or later will completely disappear." More recent information is not so pessimistic. Garrido and Montaña (1975) say it is rare, although more common in the eastern part of Cuba, and very common in parts of the Isla of Pines. Finally, in 1978 and 1979, J.F. Clements made several observations of this species over a wide area of Cuba and found it to be "locally common" in lowland forests and limestone hills. He asserts that during the past twenty years this and other game species have probably undergone population increases, owing to the strict no-firearms policy in effect throughout the country (pers. comm.) Thus it would appear that, at least on Cuba, and New Providence, the Key West Quail-Dove is not as rare as is generally supposed and to consider these islands as possible sources of dispersal is certainly not unwarranted.

The United States history of *G. chrysis* is most intriguing. Table 1 lists all known records from Audubon's day to the present, with annotations as to the suitability of each immediate site for possible breeding. As expected, all records are from southern Florida, only three occurring on the mainland (Bailey, 1925; Howell, 1932; Sprunt, 1954; Robertson and Kushlan, 1974; Stevenson, 1976). Interestingly, these latter are also the only records for this century, after a lapse of nearly 70 years, and all three birds were found out of normal habitat

Table 1. Records of the Key West Quail-Dove in the United States

Dates	Locality	Number, Sex Type of Record	Observers	Site as Possible Breeding Area
May 6, 1832	Key West, Monroe Co., Fla.	1 probable ♂ shot, no specimen	J. J. Audubon Mr. Sykes	Suitable
[May 20, 1832	Key West, Monroe Co., Fla.	1 nest	J. J. Audubon	Suitable] [†]
Sept. 15, 1889	Key West, Monroe Co., Fla.	1 ♂ specimen	J. Atkins	Suitable
Oct. 20, 1897	Key West, Monroe Co., Fla.	1 ♀ specimen	T. Moore J. Atkins	Suitable
Nov. 12, 1897	Key West, Monroe Co., Fla.	1 ♀ specimen	J. Moore J. Atkins	Suitable
Oct. 19, 1964	Hillsboro Beach, Broward Co., Fla.	1 unknown sight record	A. Inwood Mrs. N. Moseley	Unsuitable
May 3-10, 1966	Lake Worth, Palm Beach Co., Fla.	1 probable ♂ photograph	M. Nelson <i>et al.</i>	Unsuitable
Jan. 21- May 17, 1979	near Flamingo, Monroe Co., Fla.	1 ♂ photograph	Mr. & Mrs. G. Schwartzman <i>et mult. al.</i>	Marginal

†] = Record in doubt; see text.

as if vagrants. All of the 19th century records are from Key West and suggest the presence of a breeding population formerly. Indeed, Audubon (1840-1844) termed it "not rare." "Towards the middle of July they become sufficiently abundant at Key West to enable sportsmen to shoot as many as a score in a day; for, as soon as the young are able to follow their parents, they frequently resort to the roads to dust themselves and are then easily approached." Audubon's description of nests and their placement is accurate and probably refers to examples from Key West, but the particular nest he cites as found on May 20, 1832 contained *pure white* eggs typical of other columbids breeding there. For this reason I have placed this particular record in brackets, although I consider nesting likely from the bulk of evidence presented in Audubon's writings.

Within the next half-century, quail-doves became decidedly rare on Key West, probably owing to habitat loss and hunting as the island developed into a port of commerce. Indeed, "Maynard ... made a special search for them there in 1870, but failed to find any" and was informed that the loss of birds was due to the cutting of the forests (Howell, op. cit.). Near the end of the century three fall specimens were obtained, now at the M.C.Z., Harvard University. Two in 1897 were shot by hunters (Brewster, 1898) and one in 1889 by a naturalist who had not encountered the species "in some three years of careful fieldwork" (Scott, 1890).

Nearly 70 years passed before the

appearances of the three 20th century birds. Although it showed up in a suburban backyard, the 1964 bird is the only one which can be ascribed with any certainty to a particular weather event, as it followed closely on the heels of a hurricane (Inwood, 1965). The most enigmatic record of all is the 1966 bird, which also occurred in a suburban backyard, but at the height of the breeding season. The dates of the *Audubon Field Notes* summary (Cunningham, 1966) are misleading, as the bird had been present "for some weeks" prior to being reported (Nelson, 1966). Perhaps the most extensively documented rarity in United States ornithological history, the 1979 bird, was obliging to nearly all who sought it. Its stay embraced much of the normal breeding season, but to my knowledge it did not make any territorial calls, and although suitable breeding habitat exists close by (W. Robertson, O. Bass, pers. comm.), the bird chose to reside along a strip of hammock-like vegetation on a narrow roadbed that traversed a mangrove forest.

Theories on the species' occurrence.

ASSUMING THAT AUDUBON'S accounts are accurate enough to verify the existence of a breeding population in the 1830s, it remains to put the six subsequent records into some kind of perspective according to their probable origins and to define the Key West Quail-Dove's current status in North America. There are four theories that I view as plausible enough to explain the occurrences of these birds.

1. *Weather phenomena.* Hurricanes and prevailing winds have been suggested as means of dispersal to and colonization of West Indian and Bahamian islands, which have not had land-bridge connections to the mainland (or most of them to each other) since the Oligocene (Bond, 1948). Presumably there would also be some movement over time of island forms back to the mainland Bailey (op.cit.) specifically points to wind storms as a probable cause of Florida quail-dove records. However, an analysis of 134 records of West Indian birds that reached Florida in the past 100 years (Robertson & Kushlan, op. cit.), indicates "... that hurricanes have not been a major vector of West Indian birds to southern Florida." In fact, "fewer than 20 records in the sample can be associated, even speculatively, with a specific tropical storm." Furthermore, the authors state that several observations reported in *American Birds* plus those of Sutton (1945) clearly show that the majority of landbirds stay on or near the ground during such storms. Personally, I find it hard to believe that a Key West Quail-Dove, a terrestrial, woodland species which evolved in hurricane-prone areas, would be found in a situation where it could be blown away by a storm. Nonetheless, the date of the 1964 bird and the passage on October 14 of Hurricane *Isbell*, which "traversed south Florida from southwest to northeast, having crossed the western tip of Cuba the previous night" (Inwood, op.cit.), are so close as to strongly suggest this possibility.

2 *Escaped cage birds.* Nowhere does this subject have more relevance in the documentation of unusual species than in southern Florida, where dozens of species have been introduced and several established as breeding birds (Owre, 1973). Audubon (op.cit.) does not mention *G. chrysis* as a cage bird, but Bailey (op cit.) states that on Key West "... many have been brought as pets by the cigar workers from Cuba," in addition to other species of quail-doves. There is perhaps no way to verify these statements, but it is true that Cubans began to immigrate in numbers into Key West in 1869. Barbour (1923) in his account of the Blue-headed Quail-Dove (*Stanoenas cyanocephala*) in Cuba, writes: "there are two ordinary methods of trapping ground doves in general use among the country people in Cuba . . . and the *gajuros* had dozens caged to sell to the planters about Ciego de Avila, who eat them." No mention is made of quail-doves of any species being kept as pets, but Audubon (op.cit.), before the influx of Cubans, saw a pair of captive Blue-headed Quail-Doves allegedly caught on the Mule Keys of Florida, and Bent (1932) possessed two eggs "laid by a bird in captivity in Florida" (no dates given). Thus the practice of live-trapping and keeping ground-inhabiting doves apparently was known in southern Florida and certainly in Cuba. It makes interpreting the late-19th century records problematical, for the possibility exists that they represent escaped cage birds.

As regards the three recent records, we cannot entirely rule out escaped cage birds either, but a few facts greatly lessen the probability. First and foremost is that in 1968 it became mandatory to declare birds imported into the United States. For seven successive years, 1968-1974, all known importations were compiled by Banks and/or Clapp (1970-1975) and Greenhall (1977). Only 20 quail-doves were listed, all from Costa Rica in 1969. Currently there are relatively few pigeon and dove fanciers in the Miami area; none keep any quail-doves, and most do not know the Key West Quail-Dove (O. Bass, pers.comm.). During the fever over the 1979 bird a rumor circulated, claiming that a woman who raises the species in Miami had lost one. In fact, the woman never handled quail-doves but did raise button-quail (*Turnix*, family *Turnicidae*) (O Bass, pers. comm.). It would seem that the introduction of any *Geotrygon* is a rare event, even with the recent surge

in the Cuban population here I cannot comment on the tameness of the 1964 and 1966 birds, but the 1979 bird, which acted normally for this species when I observed it in late January, quickly became less shy of people. It foraged on a trail where numerous people walk and where motorized trams take people on daily guided natural history tours. I suggest that in this restricted habitat the bird became accustomed to the presence of humans. Furthermore, none of the recent birds showed any signs frequently found on large captive birds — frayed tail feathers, discolored and abraded soft parts, identification band. Perhaps none of these birds can be assigned to this theory, but because of its locale and dates of occurrence, the 1966 bird may belong here.

3. *Post-breeding dispersal.* The timing of several of the records points to a dispersal of post-breeding adults or of post-fledging immatures. The four fall birds, and perhaps even the 1979 bird, fit into this category. To what extent inter-island movements take place is unknown, but Audubon (op. cit.) apparently observed birds flying from Cuba to Key West on at least one occasion. He was definitely of the opinion that the species only spent the breeding season on Key West, migrating back and forth. Such migrations have not been suggested by any other authors or observers, however, so again we must accept Audubon's observations, or at least his interpretations, with caution. I see little reason to doubt that he observed inter-island movement, whether post-breeding or pre-breeding, a phenomenon which must occur if there is to be any significant genetic exchange through the species' scattered breeding populations. Although the species is sedentary in the traditional sense, we must not forget that it evolved within an island system and that none of its populations exhibit any differences so far as known. The Key West Quail-Dove's ability as a colonizer, while undoubtedly not high, is probably better than we think.

4. *Remnant resident population.* There is much suitable habitat not only on the Keys but also in the hammocks which dot the sawgrass prairies of southern peninsular Florida (P. Sykes, W. Robertson, pers. comm.). It comprises hundreds of acres of habitat which, in composition and aspect, closely resembles coastal forests of the Bahamas

and Cuba (Robertson, pers. comm.) Moreover, except for Key West these areas are seldom investigated by ornithologists or birders; for a variety of reasons they remain inaccessible (P Sykes, pers. comm.). Conceivably, scattered remnant populations (or even fairly recently established ones) of quail-doves could exist and pass unnoticed. Relatively little movement of individuals could have resulted in any of the post-Audubon records. The current explosion of birding enthusiasts has resulted in a corresponding wealth of new data on the distribution and abundance of birds in the United States and has sharply redefined our thinking in many cases. I await with anticipation further news from southern Florida. It is not my intent to assign each record to a specific theory and claim with assurance that the truth has been reached. The very nature of these biological events renders such conclusions folly. Nonetheless I will suggest that weather phenomena probably account for no more than a single record, and cage birds for another one (conceivably four). Theories 3 and 4 offer far more convincing arguments for the majority of records and, unless evidence strongly suggests otherwise, the source of future occurrences of the Key West Quail-Dove lies there. As it stands now, this species should be termed a rare visitor rather than casual (A.O.U. 1957) or accidental (Bond, 1956).

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Key West Quail-Dove, (*Geotrygon chrysis*), Snake Bight Trail, Everglades Nat'l Park, FL, Feb. 5, 1979. Photo/Brooks H. Atherton.

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