

Forpus passerinus (Green-rumped Parrotlet)

Family: Psittacidae (Parrots and Macaws)

Order: Psittaciformes (Parrots, Macaws and Cockatoos)

Class: Aves (Birds)



Fig. 1. Pair of green-rumped parrotlets, *Forpus passerinus*.

[Personal photograph by Vijaya Harrypersad, 11 November 2011]

TRAITS. These are one of the smallest parrot species in the world 5 inches long and weighing 23 g. They are bright green in colour being lightest and on rump and underparts. They have patches of blue on greater upper wing coverts and all underwing coverts. Primary coverts are dark blue. They have brown eyes and whitish pink bills. Females are almost identical in appearance to males except they are all green and sometimes have yellow bits on forecrown and tinged yellow around their eyes (Hilty et al, 2003).

ECOLOGY. Widespread, commonly found in dry to arid scrub, deciduous woodland, gallery forest, ranchland, urban parks, and cultivated areas. There has been evidence of instances where their populations increased due to deforestation (Hilty et al, 2003). It is native to Aruba; Brazil; Cayman Islands; Colombia; Guyana; Netherlands Antilles; Venezuela; French Guiana; Suriname and Trinidad and Tobago. It has been introduced into Barbados and Jamaica (IUCN, 2011). Grenada is located next to Trinidad yet the species was found in Trinidad but not Grenada. This is because Trinidad is a continental island whereas Grenada is an oceanic island. Continental islands were at some point in time connected to a continent whereas oceanic islands were never connected to the continent.

SOCIAL ORGANIZATION. They fly in groups. The social system of parrotlets consist of male-female nesting pairs, male-female non-breeding pairs, male-male pairs and non-breeding males that either occur alone or in groups (Bessinger, 2008). Over the years it was generally found that for all the males sighted, the number of non breeding males sighted was equal to or greater than the number of breeding males in the population. Females were almost always observed with an accompanying male. Most of the male-female pairs laid eggs but 25% of the birds did not secure a nest site and hence never appeared to reproduce. It was also found that green-rumped parrotlets rarely changed partners. Male-male pairs were the most uncommon and were sighted travelling together, allopreening each other and entering nest boxes together. Pairs typically split when one male obtained a female or when one died. Non-breeding males occurring in groups were seen molesting pairs. Large groups of up to a dozen males were also formed at the nest where females have lost their mates. They compete and engage in fights for the opportunity to mate with the now unpaired female. They either protect and feed the young or kill them off.

ACTIVITY. These birds are usually spotted in pairs or in large groups. The presence of these birds in a particular area is influenced by the availability of food. They are usually seen in groups flying very closely to each other, flying very swiftly over brush and grassland, and landing on top of trees. It is common to find them close to human habitation for example gardens and public parks. During breeding season groups break up as they pair-off (Vriends, 1999).

FORAGING BEHAVIOUR. Feed on small fruits, buds and flowers and eat many grasses and weed seeds by perching on bending stems, or from ground. Green-rumped parrotlets can be seen foraging in groups or alone. When foraging in groups they make a loud chattering. They move from one area to the next while foraging and hence may be in one area for a while before they disappear. During the period before egg-laying females gain large amount of mass and therefore stay in the nest. During this period as well as the period after hatching where females finally begin to lose mass, most of the female's food is obtained from the male. When the oldest chick reaches one or two weeks of age, the mother leaves the nest to forage along with the male returning periodically to feed her chicks (Waltman and Beissinger, 1992).

COMMUNICATION. They use contact calls for recognizing mates. An experiment conducted recorded male contact calls on repeated days as they returned to their nest where their mates which were incubating were. Variation was observed in calls in terms of length, frequency, and frequency modulation. By playing back these calls, it was found that a free ranging female would more readily responded to the calls of her own mate rather than the calls other males. This process of using contact calls reduce the cost arising from confusing calls of mates with non-mates and hence is important during incubation and brooding (Berg et al, 2011).

SEXUAL BEHAVIOUR. Nests are built during the rainy season usually in tree or fence cavities. Green parrotlets usually lay 4-6 eggs. Breeding stops during the dry season. Courtship behavior was characterized by ritualized head, tail and wing movements which were initiated by both sexes during the nesting cycle and observed to occur most prominently during the courtship period. These courtship behaviors were usually followed by both partners entering the nest cavity. The "head bowing" behavior entailed the bird bending its body forward and swinging its head up and down usually towards the opening of a potential nest cavity. In some cases the tail was lifted into the air as the head moved downwards. This usually lasts from a few seconds to 1.5 minutes. Head bowing is usually performed along with "tail fanning". This is where tail

feathers are spread open in a manner which resembles a fan. “Wing flashing” are of three types: quick flicks, full spread and shake and slow lifts. This type of behavior was performed almost entirely by males.

Nipping bouts are similar to allopreening where pairs nip at each other’s bills legs and feet. “Courtship feeding” is also usually observed before copulation (Fig. 2). In most instances females beg to begin this practice by bending forward, opening her beak and rocking her head up and down steadily. Before they can feed the female, males must first regurgitate the food. This is accomplished by rotating its head in an elliptical manner from side to side. The pair then clasps their beaks together at right angles to allow food to be transferred to female. Males typically performed “quick flicks” “full spreads” as they walk towards female and “nipping bouts” before mounting. Copulation lasts from up to seven days before eggs are laid up until six days after egg laying has terminated. After copulation, the pair engage in allopreening after which they return to their nest cavity.

JUVENILE DEVELOPMENT AND BEHAVIOUR. Parrotlets when they are newly hatched are completely helpless (Fig. 3). In the egg they utilize the white egg tooth for pipping the egg. They are bare of feathers and completely pink. Their eyes are not opened as they are not yet developed. Their feet are just strong enough to help them get back upright if they fall over. The mother continues to incubate and brood her chicks well into the first week since the chicks are still naked and vulnerable. After this time, both parents spend most of their time foraging away from the nest returning every 30-90 minutes to feed the chicks seeds. During the first 10 day period, there is very little change in appearance except for an increase in size. Beaks become more defined and eyes begin to develop. At this point chicks have enough strength and coordination to sit up, move about and beg. During the 10-20 day period, the young parrot develop pin feathers which are growing feathers still curled inside the sheath. Over the next few days, pin feathers emerge to reveal brightly green colored feathers. By day 25, the young birds look a lot like the adults. They are quite mobile at this stage as they begin to climb and beg for food. Inside the nest they do a lot of stretching and flapping as they build up muscles for their first flight. By day 30, the oldest parrotlet is ready to leave the nest. The parents are now faced with the task of dividing their time between the remaining chicks and the chicks that have left. This sometimes put pressure on the younger ones to leave the nest as well (Sly,2009).

ANTIPREDATOR BEHAVIOUR. Parent birds may control the start of incubation in order to reduce periods of high risk predation of both infants and parents themselves (Stoleson and Beissinger, 2001). They may also avoid predators through habitat selection. In lowland populations, lack of vegetation and deeper waters around nesting areas were found to be connected with lower predation rates. This suggests that the occurrence of predators may influence habitat selection. Another observation that supports this is that parrots which changed the location of their nests were more likely to move from an inferior quality nest site to a superior quality nest site and not the other way around. It was observed that young birds would chose to remain in or move to whichever is the better quality nesting site (Bonebrake and Beissinger, 2010).

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Fig 2. Green-rumped parrotlets engaging in courtship feeding.

[http://gailgarber.blogspot.com/2009_03_01_archive.html accessed 11th November, 2011]



Fig 3. Newly hatched green-rumped parrotlet.

[<http://theadventuresoffig.blogspot.com/2011/05/new-baby-parrotlets.html> accessed 11th November, 2011]