

VOCALIZATIONS OF THE ENDANGERED RED-FACED PARROT *HAPALOPSITTACA PYRRHOPS* IN SOUTHERN ECUADOR

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The Red-faced Parrot *Hapalopsittaca pyrrhops* is categorised by the IUCN as “endangered” and listed with other birds for which “action is urgently required” (Collar *et al.* 1992). It was previously dealt with as a subspecies of the Rusty-faced Parrot *Hapalopsittaca amazonina* (Peters 1937), but is now considered a full species (Ridgely 1981, Graves *et al.* 1989). The parrot is endemic, known from twelve locations in the Ecuadorian provinces of Azuay, Loja and Morona-Santiago and the Piura department in Peru where it inhabits temperate forests between 2300–3500 m (Collar *et al.* 1992, Toyne, unpubl. data).

Very little is known of the vocalizations of this species apart from its apparent flight-call which is described as indistinctive repeated calls of “*chek-chek . . . chek-chek*” (Ridgely & Gaulin 1980) or “*chek-chek-chek . . .*” (Fjeldså & Krabbe 1990). King (1989) found this loud, dissyllabic, repeated call of “*chak-chak . . . chak-chak*” to be characteristic and useful for locating flocks. Whilst foraging the birds occasionally stop and give a loud “*cheik*” (Bloch *et al.* 1991). During March to May 1992, whilst surveying forests in Loja Province, southern Ecuador for parrots (Toyne *et al.* 1992, Toyne 1993, Toyne & Jeffcote 1994), the vocalizations of *H. pyrrhops* were recorded at three locations. These consisted of semi-degraded small forests with pasture land in close proximity. During field work the parrots displayed indifference to the expedition’s presence, the closest sound recordings being made at no more than 5 m. The three study sites were:

Selva Alegre (03°32’ S, 79°22’ W).

A 400 ha forest at an altitude of 2850–3100 m situated north-west of Saraguro on the road between Saraguro and Manu. This heavily degraded forest is crossed by the quebradas Pena Blanca and Comunidad which drain into the Río Curiyacu (see IGM map CT-NVID 3).

Huashapamba (03°38’ S, 79°17’ W).

This forest was approximately 125–250 ha and was situated 6 km south of Saraguro, adjacent to the Saraguro-Loja road (see IGM map CT-NVIF2). The forest was at an altitude between 2800 to 3200 m.

Torré (03°38’ S, 79°13’ W).

This forest of unknown size was situated across land used by the two Indian communities of Namorín and Las Lagunas, between Bura and Pucana, close to where the quebrada Torré joins the Río Sinincapa (see IGM map CT-NVI D4). The forests in this area were all situated on the hill-tops between 2700–3200 m.

The vocalizations were recorded with an AKG D190E microphone, mounted at the focal point of a 12.5 cm diameter parabolic reflector and a Sony TC D3 cassette-recorder operating at standard speed. Recordings are deposited at the National Sound Archive (NSA), London, where sonograms of them were produced on a Voice Identification RT1000 digital spectrograph using a wide bandwidth (300 Hz) by E.P.T., J.N.M.F. and Richard Ranft of the NSA, Wildlife Section. These results represent the only known sound recordings for this species and demonstrate it’s distinct vocalisations.

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TABLE 1. Frequency of call types at different locations.

Call Type	Location:			Σ
	Selva Alegre	Torré	Huashapamba	
pre-flight call	4	1	5	10
foraging call	6	5	4	15
flight call	6	2	5	13
contact call	—	2	—	2
juvenile	—	—	4	4

Field work dates: Selva Alegre (12/4/92–15/4/92), Torr  (13/5/92), Huashapamba (16/4/92–19/4/92).

RESULTS AND DISCUSSION

Sonograms are representative for each particular type of call, several of which were heard at each locality. All calls consisted of harsh, screechy notes with several harmonics (Figs. 1–6).

Before flight flocks of Red-faced Parrots gave an accelerated series of variable-pitched squawk-like *cheks* within the frequency range 1.1–5.8 kHz (Fig. 1). This calling continued until they were settled in flight, then parrots gave a series of *ch-ek* . . . *ch-ek* calls (see last section of Fig. 1). The *ch-ek* was delivered as one syllable with the *ek* higher in pitched than the raspier *ch*. The *cheks* were repetitive and did not appear to be dissyllabic contra to King (1989); this difference in description is probably due to our advantage of repeatedly listening to several recordings. Our description was similar to Ridgely & Gaulin's (1980) and was consistent with Fjelds  & Krabbes' (1990); although we found this call to be distinctive and a useful aid in both identification and location of flocks.

At a roost site the call of perched parrots to incoming, flying parrots landing in the same tree was recorded. It started as rapid, high-pitched combinations of *eek*, then a throaty *thrut* fol-

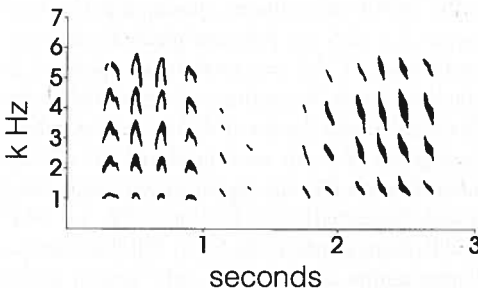


FIG. 1. Flight call. Recorded at Selva Alegre on 15 April 1992 at 06:53 h.

lowed by three slower *eeks* and another *thrut* then an *eek*. The incoming bird then landed and there was an exchange of *eeks*. Fig. 2 shows "*eek-eek* . . . *thrut* . . . *eek*" in the middle of the above exchange. A sequence of this contact call resembled "*eek-eek* . . . *thrut* . . . *eek* . . . *eek* . . . *eek* . . . *thrut* . . . *eek*". When analyzed on a spectrograph the "*thrut*" note appears as two syllables very close together (Fig. 3). Whilst the parrots either foraged or perched in a tree a combination of *eek* and *eek-eek* calls such as "*eek* . . . *eek-eek*" (Fig. 4) were recorded. These differed from the contact call given to parrots joining the roost as no throaty *thrut* notes were heard.

A juvenile perching in a fruiting *Weinmannia latifolia* tree gave a variable call to an adult bird. The vocalization started with a *chur-ch-chur* followed by a combination of *eeks*, *eek-er* and a chattering, laugh-like *eek-ha-ha-a*. Such a sequence heard was "*chur-ch-chur* . . . *chur-ch-chur* . . . *eek* . . . *ek-er* . . . *eek-eek* . . . *eek-ha-ha-a* . . . *ek-er* . . .". Sonogram 5 illustrates the sequence "*chur-ch-chur* . . . *chur-ch-chur* . . . *ek* . . . *eek-er* . . . *eek-eek* . . ."; the frequency range of this vocalization was between 0.8–8.2 kHz, greater than any adult vocalization recorded. The calling was accompanied during the screeching stage by vigorous wing beating. The adult then passed food with its bill into the mouth of the juvenile (Toyne & Flanagan, unpubl.). The juvenile call comprised of a quickly delivered *eek-eek* (of a higher, more squeaky tone than the adult *eek-eek*), and a chuckling *eek-ha-ya*, where the *ha-ya* drops slightly in pitch (see Fig. 6).

Whilst surveying the forest near Selva Alegre, three Mountain Caciques *Cacicus leucoramphus* were recorded calling 30 m from the Red-faced Parrot roost. These calls caused initial confusion as they were similar to *H. pyrrhops* foraging/perching call and comparison of sonograms showed similarities (Fig. 7). Analysis of *C. leucoramphus*

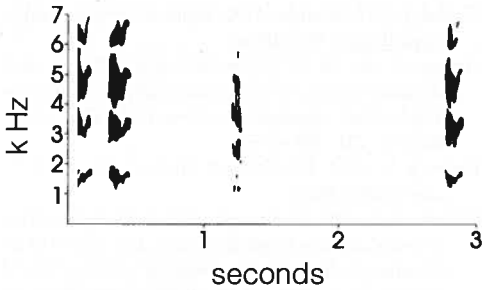


FIG. 2. Contact calls between parrots perched and landing in tree. Recorded at Torr  on 13 May 1992 at 15:30 h.

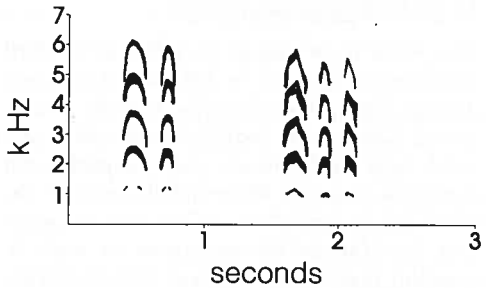


FIG. 6. Juvenile call made whilst perched. Recorded at Huashapamba on 17 April at 16:05 h.

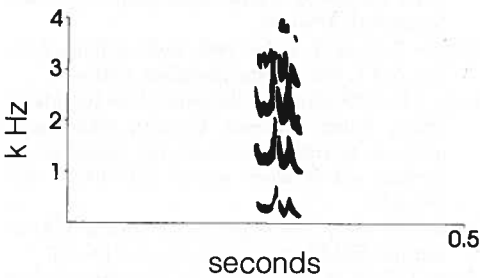


FIG. 3. "thrust" note Recorded at Torr  on 13 May 1992 at 15:30 h.

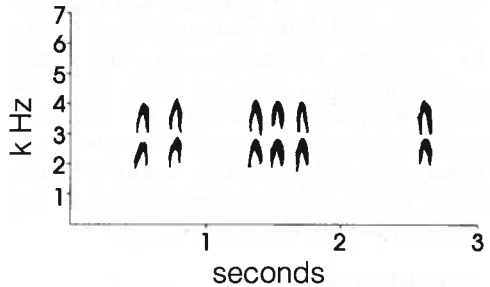


FIG. 7. *Cacicus leucoramphus* call made whilst perching in the same vicinity as *Hapalopsittaca pyrrhops* roost site. Recorded at Selva Alegre on 15 April 1992 at 07:01 h.

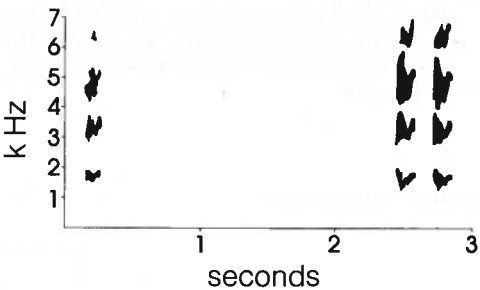


FIG. 4. Adult call whilst foraging. Recorded at Selva Alegre on 14 April 1992 at 17:55 h.

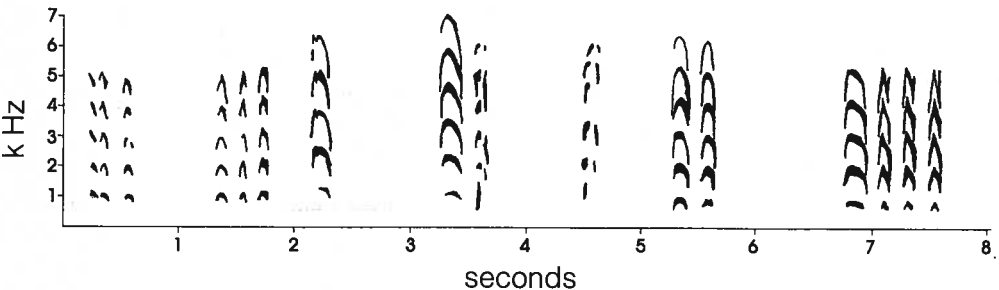


FIG. 5. Juvenile call before receiving food from an adult. Recorded at Huashapamba on 17 April 1992 at 16:02 h.

calls from non *H. pyrrhops* habitat indicates that the calls were not mimicry but part of the normal cacique repertoire (Krabbe, *in litt.*). However, fieldworkers should be made aware of the confusion that may arise when using aural cues for the identification of *H. pyrrhops* and *C. leucoramphus*.

The similarity and frequency of certain *H. pyrrhops* calls, and their concurrence with vocal descriptions from other fieldworkers in different locations suggest that the vocalizations described are typical for this species.

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