

# The songs of the Rufous-browed Peppershrike, *Cyclarhis gujanensis*

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When writing my review (Quesnel 1986) of ffrench's book "Birds of Trinidad and Tobago" (ffrench 1986) I knew that I would in time have to justify my statement there about the songs of the peppershrike. ffrench had written "Each bird has its own tune which it hardly alters". Commenting on this in my review I wrote "this is what the situation appears to be but the reality, revealed only to someone who lives where the bird is common, is much more fascinating. Each bird has a repertory of over forty tunes and within a district each bird apparently has the same repertory". This is the statement I now want to support with such evidence as I have.

The Peppershrike's song is a melodious phrase from three to nine (or ten) notes long with one or perhaps two notes emphasized. As ffrench (1973) puts it, "it invites rendition into English" and several writers have, in fact, rendered it in English. Thus, Belcher and Smooker (1937) say that the call has been rendered variously as "do you wash every week" and "We're waiting to hear you". Both Herklots (1961) and ffrench (1973) quote this, with Herklots adding that the call is variable and ffrench adding that "there is no set cadence, each individual repeating its own pattern". Even the Venezuelan birds speak English, it seems! Meyer de Schauensee and Phelps (1978) say that the call may be rendered as "please, please don't go 'way". Chapman (1894) does not translate the call into English but does say "If one answered the caller it would change the order of its notes until it became a refrain of the ordinary call. At times two birds would respond to each other in this way, continuing the performance for many minutes". What Chapman meant by the ordinary call is not at all clear to me but he did note that the song is variable.

## Methods and Observations

Near Talparo where I live the bird is very common and I hear it constantly, perhaps every day. I agree with Belcher and Smooker (1937) that there is no season at which one may not hear it. After I heard one bird sing "doux-doux you love me?" I began to translate the songs I heard for fun and over many months built up a collection of over forty translations. By means of these I was able to recognize each of the common songs almost instantly and was then in a position to study the songs more seriously. I also recorded most of the songs on a small tape recorder and could thus listen to the songs played back at a slower speed. I did not note the day of my first translation but it was before December 1983 at which time I made a list of the songs I had heard that month. I made other lists in January 1985, June 1986, July 1986 and in August 1987 when I was writing this paper. The August 1987 list is the most complete and an attempt was made to note, as far as my work permitted, every song that was sung on twenty of the thirty one days of the month. All the observations were made at Haven Hill Farm, Leotaud Trace, Talparo.

The contents of the lists illustrate one difficulty that arose. In the earliest list several translations occur that do not reappear in later lists and these are omitted from Table I. All of these translations appear just once. This means that the song was a relatively rare one. Presumably, when the song recurred later I

did not recognize it as one I had heard before and either retranslated it or ignored it. With increasing familiarity the later translation would prevail. A second difficulty is that the distance at which the song is heard influences the rendition. Thus, a sound that is heard as a single syllable at a distance may be heard as two syllables closer up. This is the case with the word "me" in the song that started the whole series of observations. When heard from close at hand the sound is more like the "Hughie" that turns up in other songs. Also, at a distance the lower parts of songs may not be heard at all.

In rendering the song in English not only were the words chosen to approximate the original sounds as closely as possible but the sentence was chosen to duplicate the rhythm of the sounds as accurately as possible. However, for some of the more complicated songs I could think of no really accurate rendition and the chosen phrase serves basically as a label I could use for identification. (In fact, all the renditions are just labels). Although standard English was used where possible, many of the songs were better rendered in the local dialect (Trinispeak George Orwell might have called it) with even a few French or French patois words thrown in. The term "doux-doux", for instance, is a patois term for sweetheart. Sometimes I could find no suitable rendition with these resources and was forced to leave a part of the phrase in peppershrikese. These parts should be easily recognizable. If some of the renditions have a touch of humour this should surprise no one seeing that the project was begun just for fun.

Table 1 gives a list of 71 songs heard in August and September 1987 with the number of times they were heard in August and in two previous months. The list is much longer than I thought it would be from earlier lists and some rare songs still remain untranslated. Those with a zero in the August 1987 column were translated in September 1987. The counts for the two earlier months cannot be used for exact comparison because the time spend on the August 1987 list was much greater. However, numbers within a month may be compared. In December 1983, the commonest call was No. 43, heard on eight occasions and the least common Nos. 54 and 67, each heard on one occasion only. In July 1986, the most common, No. 30, was noted eleven times and several others just once. In August 1987, the most common, No. 66, was noted 29 times and several others only once. Thus, it is clear that some songs are popular and are sung on many occasions; others are rarely sung. The songs of August 1987, can be divided into three groups: the very popular songs, Nos. 66, 47 and 29, sung 29, 26 and 24 times respectively; the fairly popular songs, Nos. 65, 5, 60, 43 and 12, sung 18, 18, 17, 16 and 15 times respectively; relatively unpopular songs comprising all the others which were sung twelve times or fewer. In the last group are 19 songs sung only once or twice. The popular songs in August 1987 were also popular in the other months and the methods used here would be adequate for more exact comparisons.

Table 1 shows, too, that five and six syllable songs account for 41 of the 71 songs. Nine and ten syllable songs are rare, and possibly there are no ten syllable songs at all. With that many



syllables it becomes difficult to know just how many there are. The eight most popular songs in August 1987 all had from five to eight syllables.

Short songs are often parts of longer songs. Thus, No. 1. "way too low" is part of the longer songs "This is way too low" and "This is the way to go". In any extended bout of singing these short songs are likely to give way to the longer versions or to be included in a bout of the longer versions and this might explain the comparative popularity of some. It is an aspect that needs further study just to establish the facts much less the interpretation.

A singing bird repeats one of the songs for many minutes at a time. I have no detailed records but my notes record songs lasting approximately 10 min. on two occasions and 12 min. on another. On 6 August 1986, one bird sang song No. 55 ninety times with 4-9 sec. breaks between repetitions. This means that the same song was sung for a period of about 10 min. Periods of 15 min. or more do not seem impossible. However, in an extended period of song, the song often changes to some other song without any longer-than-normal break between songs and I have heard up to six different songs sung in succession seemingly by the same bird. Sometimes the songs in a series are similar and the change from one to another very subtle. At other times the change is abrupt and startling because the songs are so different. Yet again, the change from one recognizable song to another recognizable one may take place through several intermediate ones that are not familiar. I have actually seen birds as they change from one song to another on three occasions and on one of these occasions four different songs were sung. Therefore, there is absolutely no doubt that a peppershrike can sing more than one song.

## Interpretations and Questions

The facts having been stated, it is now possible to discuss ffrench's (1986) statement "each bird has its own tune which it hardly alters" and my opposing view that each bird has a large repertory of tunes. In my review of ffrench's book (Quesnel 1986) I interpreted ffrench's statement to mean that each bird sings one tune and that this is different from that of every other bird.\* Clearly, each bird does not have a repertory of only one tune which is different from the tunes of all other birds because it is possible to hear up to four birds singing the same tune at the same time and because I have heard and seen a bird change song on three occasions. Furthermore, on that basis, to account for the 71 different tunes in one small area one would have to assume either a large resident population or a small resident population with a large, and changing, non-resident population. Neither of these assumptions appeals to me.

However, my opposing view is not the only possible one. *A priori*, other possibilities are (1) that each bird has a small repertory of tunes, each of which is different from those in the repertory of every other bird and (2) that each bird has a small repertory with some tunes common to those in the repertoires of other birds. Let us examine each in turn. The first is ruled out by the observation of simultaneous singing of the same tune by four different birds. Furthermore, assuming a repertory of four tunes per bird and a resident population of four birds, to account for 71 tunes there would have had to be a non-resident population of about 14 birds ( $\frac{71-16}{4}$ ) passing through the area.

This is not unreasonable but it means increasing the number of assumptions. In the second case with each bird having a small repertory of 4 - 6 tunes with some of them being common to all, the fact of simultaneous singing of one tune receives an explanation but this interpretation, too, requires the assumption of a large non-resident population passing through the area. Alternatively, if the number of tunes in the repertory is assumed to be about twenty with a small number in common, say four, then this too would account for a total of 71 tunes. It must be admitted that all the observations can be explained by this interpretation. However, the simplest interpretation is my original one, viz. that each bird has a repertory of all 71 tunes. This, therefore, is the one I favour.

This attempt to interpret the facts is hindered by uncertainty about the function of the song. I have tacitly assumed that the song is connected with the acquiring and keeping of a territory and that, perhaps, only the male sings. These assumptions may be wrong. To try to decide if they are, I have begun a new series of observations, but the difficulties are great. Male and female plumage is the same and is such that a bird is very inconspicuous in the canopy of a tree. Furthermore, although I have seen peppershrikes low down, at or near eye level, I have seldom heard them sing when at this level. The results of the new observations, therefore, may be just as difficult to interpret as the ones now being considered.

When ffrench spent three days with me in February 1987, he raised the possibility that the songs may form a developmental series. It is not impossible that this is so but, so far, there is little evidence for it. It was mentioned above that several songs occur in versions of different length. Is this evidence for development? Is the shortest version learnt first and the longer versions later? Two calls that are basically the same may have obvious or subtle differences. Thus, the "Yankee give it to Peter" song has a counterpart "Yankee give it to Petér" (é as in me) with the final syllable in the second version rising rather than falling. Is this evidence for development? The song "Artie check your breathing" is similar to the song "Artie check your brother". In the first song the penultimate syllable rises and the last falls in pitch; in the second song the syllables "your brother" are on a falling sequence. Are these subtle differences evidence for development? Perhaps; but if so, the stages in the development remain there for use.

More difficult questions arise. What limits the number of syllables in a song to a maximum of nine (or ten)? What determines the popularity of a song? Are the unpopular songs transitional songs sung by young birds learning the repertory? Why does this species need such an elaborate set of songs? Could it not get along with just a few songs the way other species do? How much is instinctive and how much is learnt behaviour? The peppershrike could do with some of the detailed study that has gone into the chaffinch. See Hinde (1982) and references therein.

The peppershrike songs of the Talparo area and Brazil Village are the same as those of Haven Hill Farm. The Aripo Savannas are only a few kilometres from Talparo, yet on my frequent visits I get the impression that the songs of the peppershrikes there are usually different from those of the Talparo district. This impression may be the result of incomplete observation or it may represent fact, in which case there would be evidence that young birds learn from older birds and that different districts are likely to have their own dialects. Such a situation

\* See ffrench's explanatory note following this article



would presumably arise if the districts are isolated from each other but there is no obvious isolation of the Aripo area from the Talparo area. At the present time speculation could run riot. What is needed is a thorough study by a competent biologist with the time and equipment appropriate to the job. Then, eventually, we may get some answers to the many questions.

Table I. The frequency of songs of the Rufous-browed Peppershrike at Haven Hill Farm, Talparo heard during the months shown. Songs are arranged in order of complexity starting with the simplest according to the number of syllables but with variations of the song immediately after the simplest version.

No.	No. Syll	Dec. '83	July '86	Aug. '87
1. Way too low (way to go)	3		2	10
2. This is way too low	5			1
3. This is the way to go	6	3		1
4. Free for you	3			5
5. This is free for you	5	4	7	18
6. The real wee-wee	4			2
7. You do the real wee-wee?	6		2	6
8. Please see Hughie	4	4	4	5
9. What don't you reap?	4	2	3	5
10. He sweet for sure	4		6	8
11. He is sweet for sure	5			1
12. Gimme wur-wee	4			15
13. Did he gimme wur-wee	6			1
14. To each of you	4			0
15. Sleep every day	4			0
16. Would you believe?	4		2	9
17. Up-chivy-oh	4	3	1	6
18. Yankee, up-chivy-oh	6	2		5
19. You changed your car	4			6
20. If you changed your car	5			2
21. If you could change your car	6			2
22. Check your breathing	4			1
23. Artie check your breathing	6	6	4	8
24. Artie check your brother	6			0
25. Doux-doux you love me?	5	6	1	6
26. Did he talk to me?	5		5	5
27. Civy chivy bird	5	2	1	1
28. Did you see U-wee? (U.W.I.)	5	4	5	6
29. Give it to Peter	5	2		24
30. Yankee give it to Peter	7	2	11	4
31. Give it to Petér (é as in me)	5		1	2
32. Yankee give it to Petér	7			0
33. Richard de Brodure	5	5	5	7

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No.	No. Syll	Dec. '83	July '86	Aug. '87
34. King Richard de Brodure	6			6
35. Please speak to Hughie	5		2	6
36. Did you speak to Hughie	6			0
37. All you bring your yip?	5			6
38. Give me some to wear	5			3
39. Lucky three-o'-we	5			0
40. He need to wherro	5			1
41. Take it back from me	5			1
42. Chivy cupid ho (stupid whore)	5			1
43. Yankee chivy cupid ho	7	8	5	16
44. He married too young	5			2
45. You want to wee-wee?	5			4
46. You want to wait to wee-wee?	7		4	4
47. We wait for Pettigew	5	7	7	26
48. This is from me to you	6	4	4	11
49. Look at the jumbie bird	6		6	9
50. Leave it to Chillowep	6	2	3	8
51. Yankee watch your haircut	6	5	1	12
52. Yankee speak to Hewit	6			6
53. Look in the box for me	6	5	3	11
54. Things are there for the work	6	1	2	8
55. Is he here for a fee?	6		3	10
56. Do you feel to wee-wee?	6	4	2	8
57. Did he fail to wee-wee?	6			2
58. Did he eat it for sure?	6			3
59. Artie get carried away	7	2	1	7
60. It's a pity you wherro	7	4	2	17
61. I got the feel to wherro	7			2
62. Up-chivy the law for me	7	3	2	2
63. We trying to go sea-shore	7	2	2	10
64. Things are there for the worrier	8	6	3	15
65. I caught you trying to wherro	8	5	3	18
66. We trying to go through the room	8	6	9	29
67. Chivy Chubby the worrier	8	1	3	3
68. Up-chivy Chubby the worrier	9			1
69. You getting he to get and go	8			1
70. Would you please take care of the wherro	9		3	7
71. Would you please take it clear of the wherro	10	6	2	5

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