

New information on the
'Brown-streaked' Flycatcher
Muscicapa latirostris williamsoni

D. R. WELLS, P. D. ROUND and J. SCHARRINGA

Breeding of the Asian Brown Flycatcher *Muscicapa latirostris williamsoni* is recorded from peninsular Thailand, confounding speculation that this race was a migrant from north of its known range. However, the breeders observed may not represent a migratory population. The species appears to prefer evergreen conditions, but part of each breeding territory of *williamsoni* was in open habitat, birds commonly feeding at the forest/clearing interface (where two nests were found). Breeding appeared over by July, clutch-size not larger than two, and multi-broodedness to occur. Juveniles resemble those of other flycatchers; adults in new and old plumages are strikingly different.

An inclusive interpretation of the taxonomic limits of the Asian Brown Flycatcher *Muscicapa latirostris* allows the suggestion that its widespread but rather uniform Palearctic migrant population emerged late in the history of a species that may formerly have been mainly Oriental in distribution (Wells 1982). Pockets of breeders have long been known in the uplands of India (Ali and Ripley 1972), and sparse records between southern China and Indonesia of birds of more varied morphology indicate the existence of a perhaps more ancient, South-East Asian breeding range. We speculate that this may still be widely populated and one of us (D.R.W.) has for some time been assembling the evidence. Recent discoveries include distinctive, additional populations in north-west Thailand and Sabah, with evidence of breeding from both areas (Wells 1982, Wells and Francis 1984).

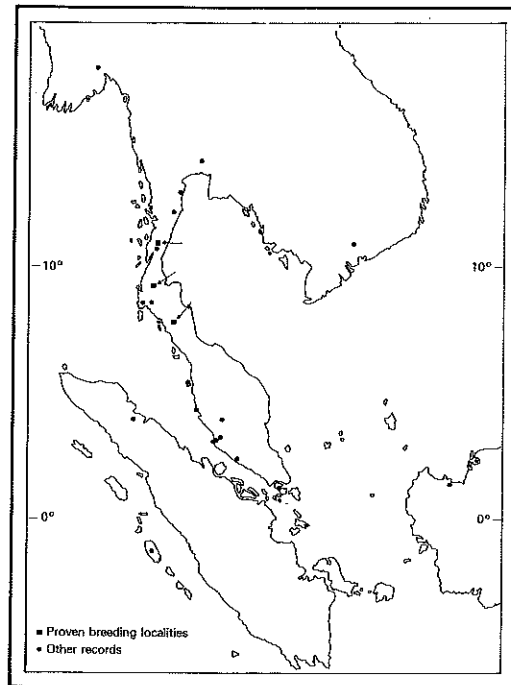
This paper fills out another piece of the map but there are still large areas of the region that, on present understanding, could hold breeding Asian Brown Flycatchers where none has yet been found. Their inconspicuousness and the hitherto inadequate knowledge of their preferred habitats may well be factors in this lack of records and we draw attention in particular to the possible presence of further indigenous populations on the Greater and nearer Lesser Sunda islands. These lie within or marginal to the known winter range of migrants; thus, short of actual breeding records, it will be necessary to establish presence outside the migration season (late July to the end of April) and if possible to collect mensural data. Fairly certainly, the blunt-winged island forms discussed by Wells (1982) are sedentary or make only short seasonal movements - *M. l. randi*, known only in the Philippines, has been taken among other migrants on Luzon (Wells 1977). Continental South-East Asian birds with a wing-tip morphology much as in Palearctic breeders, on the other hand, may be considerable intratropical migrants.

These include, in particular, the 'Brown-streaked' Flycatcher *Muscicapa latirostris williamsoni*, a form described by Deignan (1957) as a separate species but since linked with other continental subspecies of *latirostris* via plumage intergrades (Wells 1977, 1982). Apparently pure *williamsoni* have now been identified from about

latitude 17°20'N in Burma to below the equator, on Siberut island, west of Sumatra (NUSZRC) (see Figure). Deignan implied, without discussion, that *williamsoni* was sedentary but, among a greater number of records gathered since, Wells (1977) noted that all those of northern winter date were from south of latitude 10°N. The rest fell within an eight-week portion of the general autumn passage period, indicative of migration – a conclusion bolstered in peninsular Malaysia by regular seasonal appearances and the actual interception of birds moving at night. This prompted Wells to speculate that *williamsoni* might in reality come from breeding grounds north of its recorded range, and to dismiss isolated instances of post-juvenile moult at Kyeikpadein, Pegu, Burma on 30 July (BMNH) and adult primary and tail moult at Khao Phanom Bencha, Krabi province, Thailand on 3 August (ANSP) as unusual postponements of events normally completed before migration.

Field findings in peninsular Thailand during 12–18 June 1984 (P.D.R. and J.S.) and 26–30 June 1985 (P.D.R. and D.R.W.), reported here, show both considerations to have been premature. The mystery of where *williamsoni* breeds is now at least partly solved by discovery of a minimum nine territories, with proof of nesting in five, at three sites, namely 10°43'N 99°00'E in Tha Sae district, Chumphon province; within 5 km radius of the headquarters of Khao Sok National Park (8°55'N 98°33'E), Surat Thani province; and within 1 km of the headquarters

Figure. Breeding and other locality records of the 'Brown-streaked' Flycatcher *Muscicapa l. williamsoni*.



of the Khao Chong nature centre (7°33'N 99°47'E), north end of Khao Banthad wildlife sanctuary, Trang province. Breeding may, therefore, be presumed to span a minimum ten degrees of latitude of the range as currently mapped. In effect, equivalent semi-evergreen rainforest biotope extends a further one degree south of Khao Chong, over the Malaysian border into Perlis state (*cf.* Collar *et al.*, *Forktail*, this issue), and may be found to be occupied to its terminus.

Status

In 1985, migrant *williamsoni* arrived on schedule in the Kuala Lumpur area of peninsular Malaysia from 24 July. They are of unknown origin, and our findings of 1984–1985 shed no definite light on the latitude at which local breeders cease to be migratory. Hints that those located were south of this limit included repeated impressions of a longer tail than in proven migrants, which could have been due to proportionate shortness of the wing-tip folded against it. No birds were handled but the Krabi specimen mentioned above (ANSP 127964, from a locality midway between Khao Sok and Khao Chong) supplied one additional morphological clue. R. Meyer de Schauensee (*in litt.* to D.R.W., 1976) found its outer (tenth) primary to project 11.5 mm beyond the longest primary covert, which is over three times the value for migratory *williamsoni* and actually a little in excess of any broad-winged island form measured. Such a shape would be expected in a resident, but since this particular specimen was moulting and also badly worn we have no information on the rest of the wing-tip (*cf.* Wells 1977).

Preferred habitat

All the territories found were at low elevation, not above the base of slopes; indeed, apart from passage birds attracted to floodlights on the Malayan mountains, there is only one definite upland record of *williamsoni*. This is of an adult (ANSP 130379) from 1,000 m altitude on Khao Luang, Prachuap Khiri Khan province, at 11°39'N in the Thailand–Burma divide. It is dated 10 August, which is well within the known migration season, and has a typical migrant wing-shape. By contrast, northern Thai and Viet Nam subspecies (e.g., *siamensis*) have not been found in the lowlands. This difference may be determined by an apparent species preference for evergreen to semi-evergreen conditions, at least within the tropics. Such conditions are available down to sea level over relevant latitudes adjacent to the Bay of Bengal but not below 800–1,000 m in areas that experience a longer and more severe dry season.

At least a part of each breeding territory was in open habitat managed by man, either 'parkland' with a ground layer of short herbs or bare soil (much as noted for wintering birds in peninsular Malaysia) or recently fired slash-and-burn farm clearings with most of the soil bare, apart from fallen logs. Clearings reinvaded by appreciable secondary cover were not used, including one at Khao Sok in 1985 that had been occupied when clear in 1984. A freshly burned farm clearing with fallen wood near Sandakan, Sabah, is, incidentally, the site of collection of the only known parent and dependent fledglings of the Borneo subspecies *M. l. umbrosa* (C. M. Francis, postscript to Wells and Francis 1984). These sites were in all cases

surrounded by secondary forest including, at Khao Sok, much bamboo, and it may be guessed that prior to deforestation *williamsoni* would have sought out fresh wind-throw gaps.

Foraging behaviour

Where no trees had been left standing in isolation, the interface between forest and clearing provided most of the perches from which feeding sallies were launched. On many occasions, adults with dependent young, and older fledglings themselves, were also noted using low, charred stumps and fallen wood often fully exposed on open ground. More unexpected behaviour in all parents feeding young was the regular taking of food items from the ground itself. One bird, watched as it tended a brood of nestlings at Khao Chong on 16 June 1984, flew down into short grass seven times in 43 minutes, during which it visited the nest 12 times. Ground foraging was not seen in independent birds, nor has it ever been recorded in wintering individuals in peninsular Malaysia. The latter not infrequently snatch from surfaces, but strictly only from those that are arboreal, such as bark (Wells 1977, Ramachandran 1982).

Fully exposed clearings may not be used for the whole day. In one at Khao Sok, watched under bright, windy conditions on 29 June 1985, an adult and two fledglings fed in the open only before 08h30 and after 15h45. At 08h30 they were seen to enter adjacent bamboo jungle and are presumed to have sheltered there through the hottest part of the day.

Breeding, brood-size and broodedness

Failure to find nests or any fledglings with less than full-grown wings or tail suggests that by the end of June 1985 the breeding season was over, i.e. at least one month before the expected peak of the south-west monsoon wet weather in August–September.

Mossy, open-cup nests found on 12 and 16 June at Khao Sok and Khao Chong respectively were both in forest-edge trees, on the tops of horizontal boughs 15–18 m above ground. Asian Brown Flycatchers in India select similar sites (Ali and Ripley 1972). Both nests were being visited frequently but neither could be reached to examine contents, though two gaps were seen above the rim of the second. The number of fledglings of equivalent age consorting as evident siblings was two in two cases although in two other instances only a single young was seen. It is unlikely, therefore, that *M. l. williamsoni* has a clutch larger than c/2, which is below that reported in India but the modal value among insectivorous passerines of the Malay Peninsula (Medway and Wells 1976).

In both years, indications of multi-broodedness were observed, with overlap in the raising of consecutive broods to independence. Thus, in the first slash-and-burn clearing at Khao Sok on 12 June 1984 two fully speckled fledglings accompanied a third apparently older bird in post-juvenile moult, with a nest that evidently contained chicks nearby. While it is possible that two or more territories overlapped here, no more than two adults were ever present and were seen briefly to visit the nest together. At least the younger fledglings were also being fed and the inference is

that two, and possibly three, broods were being raised in overlapping succession by a single pair. It was not established if the feeding of the broods was partitioned between mates but no other group of fledglings in either year was seen to be tended by more than a single adult. One adult at Khao Sok in 1985 associated with one fully speckled fledgling and a second in mid post-juvenile moult, though it fed only the younger of these.

Plumage, wear and basic moult

The full juvenile plumage was noted as white below with narrow but sharp blackish-brown streaking on the breast; dark brown above including wings and tail (rump and uppertail-coverts slightly rufescent), with all of the upper contour plumage boldly spotted buff-white; the greater coverts and tail tipped, and tertials edged, rufous-buff. In the field, juveniles may not, therefore, be easy to separate from those of other flycatcher species.

Our early misgivings about specific identification arising from unexpected foraging behaviour were redoubled by the appearance of the unmoulted adults. By mid-June, fading or abrasion had in all cases reduced typical ventral streaking to a soft mottling, and eliminated all, or virtually all, trace of an eye-ring and wing-patterning, and all rufescent coloration except on the tail, leaving the birds dull, plain grey-brown above and whitish below. The adult feeding nestlings at Khao Chong on 16 June may have commenced basic moult as it had a brownish wash on the sides of the breast and rufous tips to the greater coverts (*cf.* the description of fresh adult plumage in Wells 1977).

By late June 1985 at Khao Sok, moult had proceeded further. At least one lone adult was in full, fresh, basic plumage, permitting an almost feather-by-feather confirmation of the *williamsoni* identification. Its lower mandible was distinctly more orange-yellow than in unmoulted birds implying, but not necessarily proving, that this feature, too, may vary seasonally. This bird gave high-pitched subsong from a restricted area of clearing edge not far from a 1984 breeding site, but date is the only indication that it may have nested locally itself. Of other adults still tending young in that week, one was completely unmoulted, hence strikingly different-looking, and the other had just begun moult, with a recognizable chocolate-brown wash on the sides of the breast. One of two fledglings associating with it was sufficiently far into post-juvenile moult to be identified beyond reasonable doubt as *williamsoni* and thus to reaffirm the connection between the two plumages.

A contrast as striking as this between the new and old plumages of the adults of *williamsoni* had not been expected from experience of Palearctic subspecies on passage through the tropics in spring and autumn. Depigmentation may be extreme in *williamsoni*, but further post-breeding (wet season) collecting is needed to provide the necessary basis for comparison, since no other South-East Asian population is yet known in its freshly moulted plumage. For this reason, also, further subspecific allocations, at least in the continental tropics, should be made with caution. In the meantime, field observers in the region are urged to be watchful.

BMNH, NUSZRC and ANSP are, respectively, the British Museum (Natural History), the

National University of Singapore Zoological Reference Collection and the Academy of Natural Sciences, Philadelphia, from all of which specimens have at one time or another been borrowed. We thank Mr Phanat Rattanakorn and Mr Prasert Khunnarong, superintendents of Khao Sok and Khao Chong respectively, for their assistance and hospitality. D.R.W. and P.D.R. also wish to acknowledge Peter Alexander-Marrack who has allowed them to use joint field observations made in 1985.

REFERENCES

- Ali, S. and Ripley, S. D. (1972) *Handbook of the birds of India and Pakistan*, 7. Bombay: Oxford University Press.
- Deignan, H. G. (1957) A new flycatcher from southeastern Asia, with remarks on *Muscicapa latirostris* Raffles. *Ibis* 99: 340–344.
- Medway, Lord and Wells, D. R. (1976) *The birds of the Malay Peninsula*, 5. London: H. F. and G. Witherby.
- Ramachandran, S. D. (1982) *Arboreal feeding habits of birds in the University of Malaya campus*. B.Sc. dissertation, Zoology Department, University of Malaya.
- Wells, D. R. (1977) *Muscicapa williamsi* Deignan; a reappraisal. *Bull. Brit. Orn. Club* 97: 83–97.
- Wells, D. R. (1982) Notes on some representatives of the Brown Flycatcher *Muscicapa latirostris* Raffles in Southeast Asia. *Bull. Brit. Orn. Club* 102: 148–153.
- Wells, D. R. and Francis, C. M. (1984) Further evidence of a resident Brown Flycatcher *Muscicapa latirostris* in Borneo. *Bull. Brit. Orn. Club* 104: 125–127.
- D. R. Wells, Zoology Department, University of Malaya, 59100 Kuala Lumpur, Malaysia.
- P. D. Round, Association for the Conservation of Wildlife, 4 Old Custom House Lane, Bangkok 10500, Thailand.
- J. Scharringa, Steenen Camer 34, 3721 NC Bilthoven, Netherlands.

Crab-plovers *Dromas ardeola* in the Gulf of Kutch

P. PALMES and C. BRIGGS

An anomalous wader, the Crab-plover *Dromas ardeola* of the north-eastern Indian Ocean, was studied in and near the Gulf of Kutch Marine National Park in February and March 1984. Some 2,300 birds were counted throughout 40% of available intertidal flats, so the total population of the area may be 5,000 or more. Roosts were traditional, cohesive and tidally related. When feeding (which may also occur at night), adults spaced out evenly along the shoreline; most immatures foraged close to (some soliciting food from) adults. Two foraging techniques were: motionless waiting, then dash or walk and stab (commoner, for larger crabs); slow pause-peck-pause for smaller prey. Intra- and interspecific kleptoparasitism occurs. Handling of prey varied with size; immatures took smaller items and handled them longer. The breeding grounds of the Gulf of Kutch population are not known to be local.

Crab-plovers *Dromas ardeola* are extremely unusual waders. They have customarily been placed in a family of their own, Dromadidae, and were considered to be closely related to the stone-curlews Burhinidae (Jehl 1968), but DNA studies place them as a subfamily Dromadinae of the pratincoles and coursers Glareolidae, this in turn being placed in the superfamily Laroidea (i.e. closer to the gulls and terns than to true plovers) within the Charadriiformes (Sibley and Ahlquist 1985). Their breeding habits are unique within the Charadriiformes: they nest colonially in burrows in sandbanks and the females produce a clutch of only one egg; the young are precocial, but unable to walk at first and remain in the burrow, relying on the adults for food; they continue to be fed by the parents after they leave the nest and apparently remain dependent for a considerable period – indeed young have been seen to solicit food from adults on passage and in winter quarters, although begging becomes indiscriminate and juveniles may even beg from each other (Cramp and Simmons 1983).

Crab-plovers are confined to tropical coastlines and their range extends eastwards from the Red Sea and the west coast and islands of Africa, through the Arabian Gulf and the Indian Ocean, as far as the east coast of India and the Andaman Islands (Ali and Ripley 1969, Cramp and Simmons 1983, Urban *et al.* 1986). They have been recorded as winter visitors to Pakistan and the west coast of India (Ali and Ripley 1969) and, prior to this study, the Gulf of Kutch was reported to support a small but significant winter population (S. Chavan pers. comm.). It remains unknown whether the birds breed in the Gulf of Kutch. The nearest breeding records are from southern Iran and Oman, and possibly also Sri Lanka (Ali and Ripley 1969, Phillips 1978, Cramp and Simmons 1983).

The Gulf of Kutch Marine National Park provides the specialist habitats they need to obtain their diet of crustaceans and other marine invertebrates, i.e. shallow lagoons or tidal zones exposing mudflats and coral reefs (Archer and Godman 1937). Their behaviour in the winter quarters is gregarious with a crepuscular though tidal-based activity pattern (see Cramp and Simmons 1983).