The Barn Swallow (*Hirundo rustica*) in Australia

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The occurrence of the Barn Swallow in Australia until 1960 was known only from one specimen taken somewhere on the north coast of Australia last century. Even today there are records only from Derby, W.A., the Darwin area, N.T., and from scattered localities in Queensland. In this paper the evidence of records of the Barn Swallow in Australia is reviewed and the writer's recent observations of the species in three different localities in eastern Queensland. General information with taxonomy is also included; the local (similar) species, the Welcome Swallow, is discussed.

INTRODUCTION

The Barn Swallow is one of the best known of all birds in Europe. It is widely loved and is often mentioned in poems and in the texts of folk songs.

Every child knows that the Swallow's nest with young is one of the symbols of happiness. It is regarded as the harbinger of spring. The proverb "One Swallow does not make a summer" is known in every European language. It means that there can be more bad weather after the first Swallow is seen in the spring.

In Europe and in Japan, the Swallow appears as a motif in art works for its delicate simple beauty, remarkable flying ability and for its tameness and trust in people.

FIELD IDENTIFICATION

For general appearance and for differences between juvenile and adult see illustrations in Heinzel, *et al.* (1974, p. 207): Size: Like the House Sparrow but delicately built, slender, body "drop-shaped," well adapted for an aerial life. Upper parts: glossy blue-black; Under parts: usually creamy or pinkish-white, but varying in colour from white to buffish-chestnut. The races *tytleri* and *savignii* have underparts reddish-chestnut; Throat: rich reddish — chestnut; Forehead: same colour as throat; Breast band: blue-black, relatively wide in nominate race, but narrow or even incomplete in the other races; Tail: long, very deeply forked. All tail feathers have an oval white spot on the inner web, clearly visible in flight. The long tail streamers are often missing in the winter grounds; Wing: black, long and pointed; Bill: black, small and flattened with a wide gape; Legs: black, weak and very short; Eyes: brown; Juvenile: considerably duller, breast band brown, or greyish-black, chestnut parts much paler, tail streamers much shorter; Call: "tsink" or "tswit", usually repeated. Song a pleasant twittering and warbling notes, long when perching, short in flight; Flight: effortless, extremely elegant, often flicking from side to side with great manoeuvrability. Although the flight looks rapid, the Swallow is in fact a slow flyer.

HABITS

Aerial feeder. Perches freely on telegraph wires, buildings, reeds and on thin bare twigs, not among foliage. When collecting nesting material it settles on the ground, but seldom for resting purposes and very rarely for food. Bathing is a brief dip into water during flight. Usually tame and trusting, it freely enters houses to nest, often in noisy places. It is highly gregarious after breeding, during migration, and in its winter grounds. Except for the race *savignii,* it is strictly migratory.

BREEDING RANGE

Breeds throughout the Northern Hemisphere, to about 71°N Lat. in Scandinavia; 64° N in Siberia; and 67° N in Alaska. In southern areas it breeds also in high mountains. In central Europe it breeds up to about 1000 metres altitude, and in the European Alps to about 1800 metres. D. S. Peters (in Grzimek, 1973) found a Barn Swallow's nest in the Mexican state of Puebla, on an arch in the city of Cholula at 2200 metres. In Japan the bird occurs up to about 1200 metres (Yamashina, 1961).

IDENTIFICATION

The Barn Swallow usually nests twice, occasionally three times in a season. According to Harrison (1975) the breeding season is from mid-May in the south, to late June in northern U.K. The size of the clutch varies from 3-8, usually it is 4-5. Average measurement of the eggs is 20.0 x 13.7 mm.

The eggs are white, sparsely spotted reddish-brown, lilac or pale grey. Usually there is a necklace of spots at the blunt end. While the female is incubating, the male may sleep at night perched on the edge of the nest and only occasionally incubates. Incubation takes 14-16 days. Nestling period is 17-24 days. The nest is cup-shaped; built by both parents from mud pellets and dry grass, it is lined with feathers and hair. Feathers for lining are often taken on the wing.

Nests are found in building corridors, in the living rooms of farm houses, and even in tents of nomads on the Asiatic steppes.

Nests are commonly built between two to ten metres high, but J. Hickey found one nest in Minnesota (U.S.A.) observation tower 32.6 metres (107 feet) above ground (Welty, 1962).

Dementev and Gladkov (1969) state that Barn Swallows in the Russian Far East readily choose Russian houses (probably preferring their architectural features) rather than Korean or Chinese houses. La Touche (1925-1930) says that the Swallows are favourites among the Chinese, who allow them to breed in their houses.

MIGRATION AND WINTER GROUNDS

The Barn Swallow is the most widespread of all Swallows. During winter in the Northern Hemisphere it practically disappears from the Holarctic Region, moving south. It is one of the few species of passerines with long migratory routes. It may fly 11,000 km from Scandinavia to South Africa, while New World Barn Swallows winter from Panama to central Chile and northern Argentina. The European and west Asian population winters in

Africa, south of the Sahara to the Cape Province.

The eastern Asian birds spend their northern winter on the Indian subcontinent and in northern Australia. The earlier authors state that the wintering area for the Asian population is usually in south-east Asia. Mayr (1941) included northern Australia.

Ornithologists who have been studying the distribution and the migration of birds on a larger scale were surprised at the lack of records of Barn Swallows for Australia until it was recognized as a regular visitor, at least for Derby, north-western Australia. Swallows travel in large flocks during migration, usually flying during the day and sleeping at night in reed beds en route. Some remarkable nocturnal movements nevertheless have been recorded (Moreau, 1961). During the return flight from Africa to Europe in spring they follow the 9.5 C isotherm — an imaginary line connecting different geographical points having the same temperature.

Dorst (1962) says that the Swallows from Europe do not leave on a definite date. From July some individuals are preparing to migrate, at least those that have not raised a second brood. During September practically all birds have disappeared. In China the birds begin to leave towards the end of August, but in eastern China some can be seen all year round south of the Yangtse as stragglers (La Touche, loc. cit.).

Seventy years of bird-banding have produced many interesting results. The oldest known age for the Barn Swallow is sixteen years, established by banding. Mead (1974) calculated that this individual must have flown about 200,000 miles in direct migratory flight, but in the actual distance flown would have exceeded 1,000,000 miles throughout its lifetime. There are over 170 recoveries in South Africa of Barn Swallows banded in Britain. Elliott (in Newman, 1971) believes that 10,000 swallows banded in South Africa will bring in (on average) 30 recoveries from Europe, while 10,000 swallows banded in Britain will produce only six recoveries from Africa. In southern Africa the Swallow is one of 19 passerine species migrating from the Palaearctic Region. It is very common there and before returning north it congregates in enormous numbers. (See Newman, 1971, photo p. 41).

A bird-banding team working in Korea obtained 24 recoveries southward of Korea as follows: South Vietnam 1, Sarawak 2, Sabah 2, Thailand 9, Taiwan 3, Malaya 2, Philippines 5. (McClure, 1974).

Meinertzhagen (1955) recorded the flying speed of the Barn Swallow at between 37 and 51 km/hour. The birds were feeding and were measured by speedometer. Actual flying speed during migration is higher. Mountfort (1970), while in East Pakistan, described how the sky was suddenly full of migrating swallows. It was late in November and in one hour he estimated four or five thousand birds travelling south-east toward the Burmese coast.

TAXONOMY WITH DISTRIBUTION NOTES

The Barn Swallow is taxonomically very interesting and currently not well defined. East Asian races especially are not well understood — in particular the status of the race *saturata* is uncertain. Mayr (1969, p. 190) says: "A population is recognized as a valid subspecies if 75 per cent of the individuals differ from "all" (=97 per cent) of the individuals of a previously recognized subspecies."

Mayr and Greenway (1960) write: "Much additional material from these regions (Eastern Siberia, Kamchatka, the Amur region and Manchuria) is necessary before the status of this northeast Asiatic population can be finally determined."

Meinertzhagen (1930) says that it is also probable that the *javanica* group of southern Asia and the *lucida* and *angolensis* group of tropical Africa are forms of *Hirundo rustica.* Asian races *gutturalis* and *tytleri* have been recorded as stragglers from Alaska (Gabrielson and Lincoln, 1959).

The eight described subspecies according to Mayr and Greenway (1960) with a note of the other authors are as follows:

1. *Hirundo rustica rustica* Linnaeus 1758. Broad band of glossy blue-black across the breast, wider than the other races. Underparts vary from white to pinkish-buff. Breeds from the British Isles, the whole of continental Europe, north-western Africa north of the Atlas Mountains to western Asia as far east as the Himalayas.

According to Ali and Ripley (1972) it intergrades in Nepal with the race *gutturalis.* Two other described races, *afghanica* and *ambigua* are identical with *rustica.* For *ambigua* see also Ali (1962).

2. *Hirundo rustica transitiva* Hartert 1910. Originally described as *Chelidon rustica transitiva.* Breeds in Israel and western Jordan. In winter from Egypt south to Tanzania. This form — according to Meinertzhagen (1930) is in fact intermediate between the typical white-breasted form of *rustica* and the dark red-bellied Egyptian race *savignii.*

3. *Hirundo rustica savignii* Stephens 1817. Under-parts reddish-chestnut. Breeds in Upper Egypt in the Nile delta. Not migratory, never recorded outside Egypt.

4. *Hirundo rustica gutturalis* Scopoli 1786. Under-parts usually white but some have a tinge of buff or pink. Blue-black breast band is narrow, often broken interrupted. Breeds in the Himalayas from Nepal eastward to China, Mongolia, Manchuria, Amurland, Ussuriland, Korea, Sakhalin, the Kuriles, Japan and Taiwan. Winters as far south as northern Australia.

5. *Hirundo rustica tytleri* Jerdon 1864. Under-parts intensive reddish-chestnut. Breeds in north-eastern Siberia, north to 68 N on Kolyma. Winters in eastern Bengal, Burma and Thailand.

6. *Hirundo rustica mandschurica* Meise 1934. Breeds mainly in Manchuria. Winters probably in south-eastern Asia. According to Vaurie (1959) this race is identical with *saturata.*

7. *Hirundo rustica saturata* Ridgway 1883. Under-parts very

variable. Little known race. Breeds from the Lower Amur, coasts of the Sea of Okhotsk and Kamchatka. Vaurie (1959) says: "Until the status of the Far Eastern populations is settled it is unwise to attempt to identify migrants or winter visitors as *saturata.*"

8. *Hirundo rustica erythrogaster* Boddaert 1787. Under-parts usually pale buff, sides of breast bluish-black, sometimes extending across the breast in a narrow band. Breeds from north-central Alaska, south to central Mexico and western Florida. Winters from Panama south to northern Argentina and central Chile. According to Sowerby (1923) this race has been reported, apparently wrongly, from the Manchurian Region of eastern Asia.

SIMILAR SPECIES — THE WELCOME SWALLOW

The only similar species in Australia is the Welcome Swallow (*Hirundo neoxena*). Although identification of the Barn Swallow in the field is not so difficult as is generally thought, it could be confused with the Welcome Swallow. (The ideal presentation for correct identification is if the swallow is perching and facing the observer).

Slater (1974), on the occurrence of the Welcome Swallow, states: "Most habitats except forest and desert." I however found its nests also in the treeless arid plains of the Andamooka Opal Fields of inland South Australia, as well as in the centre of the huge rainforest area of the Gibraltar Range National Park in north-eastern New South Wales. In the second instance (January, 1975) the nests were under bridges. At Andamooka (September, 1973) there were nests in narrow, vertical mine shafts, sometimes deep underground. One such nest was 3.5 metres below ground level in a daily used mine shaft 80 cm in diameter.

The Welcome Swallow occurs as a breeding species in eastern and southern Australia, including Tasmania. It is absent from the northern parts of Western Australia and from most of the Northern Territory. In southern areas it is partially migratory, moving north for the winter, but some birds are always present. Even in Tasmania some birds remain for the winter months. Wilson's Promontory, Victoria, is a migratory "bridge" for birds flying to and from Tasmania and the mainland. Cooper (1975) recorded the greatest numbers of birds during April and May and again in September and October. May is a peak when the total is more than seven times that of the nesting period. He also found that the summer-nesting birds on the Promontory were residents.

Almost every ornithological text-book states that the true swallows are absent in New Zealand. Darlington (1957) mentions only the Tree Martin for New Zealand (stragglers from Australia).

The Welcome Swallow in fact is one of a succession of Australian birds that have established themselves in New Zealand in recent times. This self-introduction is very interesting. There were only three records of the Welcome Swallow in New Zealand up to 1957, and breeding was first proved in 1958. The species has spread rapidly and now has been recorded from all districts

of the main islands (Kinsky, 1970). Mayr and Greenway (1960) listed eleven subspecies of Pacific Swallow (*Hirundo tahitica*) including the Welcome Swallow (*H. neoxena* Gould 1843). The race *neoxena* is regarded by some authorities as a good species. Macdonald (1973) writes that the Welcome Swallow forms a superspecies with the Pacific Swallow. Storr (1973) states that *neoxena* is probably not conspecific with *tahitica*. Schodde (1975) listed *H. neoxena* and *H. tahitica* separately.

EALIER AUSTRALIAN RECORDS:

John Gould (1865) described a new species, the Torres Strait Swallow (*Hirundo fretensis*) from the specimen taken by Dr. F. M. Rayner on the north coast of Australia on October 18, 1860. Later the specimen was determined by Bowdler Sharpe (1847-1909) of the British Museum as a juvenile of *Hirundo rustica*.

Gould wrote: "In general appearance it is very like an English Swallow at the end of its first autumn, but its bill is larger and longer than that of any adult specimen."

Almost a hundred years later on January 20, 1960 Peter Slater (1961) and his wife found a flock of Barn Swallows in the main street at Derby, W.A. In the two successive months to March 23, 1960 the Swallows (up to 92 birds) were observed regularly. Next year the first birds were seen on November 7. The last sighting of a flock of about 300 birds was on April 2, 1961. The Barn Swallow is now regarded as a regular visitor to Derby, arriving in early November and leaving at the end of March.

Gill (1970) observed one Barn Swallow at the Innisfail Aerodrome, on January 12, 1966 and again on March 9, 1966. Between January 15 and March 12, 1968 a single bird was recorded there about eight times.

Crawford (1972) observed one Barn Swallow at Lambell's Lagoon about 30 km south-east of Darwin, N.T. on October 14 (? year). Another was seen together with a Tree Martin at Whitestone Ridge on December 1, 1971. John L. McKean saw the Barn Swallow at Darwin on October 29, 1971.

Wheeler (1963) reported another occurrence of the Barn Swallow in Australia from south-eastern Queensland. Mrs. Dorothy Makin observed one bird near the lighthouse on Sandy Cape at the northern tip of Fraser Island on November 30, 1962. Makin (1968) was able to capture it and observe it in the hand. Her description agreed with *H. rustica*. This occurrence is to date the southern limit of the species in Australia (Wheeler, 1975).

Members of the Harold Hall Australian Expedition have seen a few swallows at Mount Anderson in north-western Australia. D. J. Freeman (in Hall, 1974) is of the opinion that they were possibly late-wintering *H. rustica*. The birds were seen during May in the area where the Welcome Swallow normally does not occur.

PERSONAL OBSERVATION IN QUEENSLAND:

First locality: Canungra.

On December 26, 1974 I found one Barn Swallow among

about 40 Welcome Swallows, approximately 3 km south-west of Canungra in south-eastern Queensland. The habitat is grazing country in a shallow valley with scattered eucalypts. The nearest coast is Surfers Paradise, 28 km east. The Swallows were perching on telephone wires. When approached more closely the majority of birds flew away. Only seven remained, including the Barn Swallow. These allowed an approach to about six metres. It was observed for about four minutes, when it flew away. It's call was: "tsink, tsink." After a little while it perched on telephone wires again about 100 metres from the original place.

I observed it for almost a half an hour. Its size and outline were like that of the Welcome Swallow but its colour was different. It had glossy blue-black upper parts, the forehead and throat were rich rufous and a narrow blue-black breast band contrasted sharply with creamy-white on the rest of the breast and belly. The long tail feathers were fully developed. During the trip further north large numbers of Welcome Swallows were examined, but no Barn Swallows were found.

Second locality: Garradunga near Innisfail.

The Barn Swallow observed near Canungra was found by accident. It encouraged me to watch out for swallows on my next trip to Queensland a year later.

In December, 1975, Peter Klapste and myself visited north Queensland specially to observe the Barn Swallow. A large number of swallows was examined from northern New South Wales northwards on the journey. Particular attention was directed to Innisfail aerodrome where the Barn Swallow has already been observed. However only Welcome Swallows were found. On December 28, 1975 at 1550 hours while searching near Innisfail, 16 swallow-like birds were seen perching on telegraph wires at the railway station at Garradunga. Upon closer approach 14 of them were recognized as Barn Swallows and two as Fairy Martins (*Cecropis ariel*). All were clearly seen at close range and in good light for a long time. There was a loose flock of swallows flying low over the sugar plantation nearby. After a short time these perched on the wires and could be counted. There were 86 Barn Swallows and 20 Fairy Martins. Another 35 Barn Swallows and 10 Fairy Martins were estimated to be on the wing, giving totals of 120 Barn Swallows and 30 Fairy Martins at this place.

The Barn Swallows and Fairy Martins were flying between one and fifteen metres hawking for insects over the cane-fields. At the same time about 30 Grey Swiftlets (*Collocalia terraereginae*) were hawking for insects at approxmiately 30 metres.

About 1 km from the railway station another group of Barn Swallows was seen perching on telegraph wires. The count was 73 birds. No other species accompanied them. Approximately 30 other Barn Swallows were on the wing, so that about a hundred Barn Swallows were present. In the area around Garradunga there were in all at least 220 Barn Swallows. This estimate appears to be justified from the 3 days spent camping and studying the birds. The Barn Swallows were under observation almost all

of the time. Seven Tree Martins were also seen among Barn Swallows, and on one occasion Welcome Swallow and Barn Swallows were perching together. The Grey Swiftlets also were hawking for insects among the Swallows and Martins. On two occasions a single Barn Swallow was observed perching in a coconut palm. The other birds present at the locality were as follows: Bar-shouldered Dove (*Geopelia humeralis*), Crimson Finch (*Neochmia phaeton*), Chestnut-breasted Finch (*Lonchura castaneothorax*), Yellow-breasted Sunbird (*Nectarinia jugularis*), Tawny Grassbird (*Megalurus timoriensis*).

Every bird and animal has a specific escape distance between itself and an enemy or intruder. Hediger (1955) has studied this in detail. The escape distance of the Barn Swallow during the nesting period is usually much less than it is in the winter grounds. The large flock near the railway station did not permit an approach closer than some 30 metres while at the other place 1 km distant the closest approach was some 40 metres. While perching, small groups and single birds permitted closer approach to be made-often to less than 10 metres. During the length of time spent among the swallows the only call heard was: "tsink, tsink". About two-thirds of the Barn Swallows were moulting and had no long tail feathers. More than half of them were juveniles, generally duller than the adults, and with a narrow breast band more brown than black. The throat and forehead were much paler.

Garradunga is a small settlement with a few houses, church and a hotel. Farmhouses are scattered about amidst clumps of trees. The terrain around the settlement is almost flat, while the surrounding hills are covered in rain-forest. Sugar-cane plantations, characteristic of the area are devoid of trees.

Third locality: Newell near Mossman.

Practically every swallow-like bird seen in the Innisfail and Cairns areas was examined. In Cairns itself there were relatively large concentrations of swallows in many places, especially along the Esplanade and near the harbour. Only Welcome Swallows were found.

On December 31, 1975, at 1340 hours a swallow was seen perching on a wire directly above the Post Office at Newell.

It was immediately recognized as the Barn Swallow. About 100 metres beyond were another two Barn Swallows, also perching on wire.

This place is right beside the coast, just north of Mossman.

At Garradunga and Newell over 40 colour transparencies of the Barn Swallows have been taken. Some show other birds as well, such as Fairy Martins and Chestnut-breasted Finches, perching with the swallows. Several of these slides have been shown at the February meeting of the Bird Observers Club in Melbourne, 1976.

CONCLUSION

Although most modern ornithological publications describe the Barn Swallow as a wintering bird in northern Australia, there are not many records to date.

There are no records of a huge area of Gulf country and many other places, probably because of lack of observers in the north. The Barn Swallow is known to be a regular visitor to Derby, W.A., and most probably it occurs regularly at other localities in northern Australia.

Thailand is a famous wintering area of this species in Asia. After Lekagul and Cronin (1974) there are three subspecies in Thailand — *tytleri, mandschurica* and *gutturalis.* In Bangkok itself over 100,000 Barn Swallows roost at night on the electric wires from November till the end of April.

McKean, *et al.* (1975) recorded the Barn Swallow for the first time from Timor. It was seen at seven different places.

In Australia the bird has been observed in coastal and near-coastal localities only.

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