

## Nesting of the Reed-Warbler and the Little Grassbird

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During the 1961 breeding season I spent a lot of time wading through the reed-beds of the various swamps, formed by excess irrigation water, in the Dareton district, New South Wales. As a result I was able to examine 120 nests of the Reed-Warbler (*Acrocephalus australis*) and 90 nests of the Little Grassbird (*Megalurus gramineus*). The original intentions of studying nest success, clutch sizes, the large-scale banding of young, etc., were thwarted by exceptionally heavy rain coinciding with irrigation periods, which caused rapid rises of the water levels and consequent destruction of nests. However, some interesting facts about nest construction emerged from the field work.

Of the various authorities consulted, none records the use of feathers as a lining in the nest of the Reed-Warbler. I found only seven nests which did not incorporate feathers in the lining. Usually about six to ten were used, each being worked into the thin strips from reed-stems which formed the greater part of the lining. The soft, whitish, body-feathers of the Black Swan (*Cygnus atratus*) were the most favoured. Some nests were found that had many more feathers, so that at a cursory examination feathers appeared to be the main lining material. One nest, in particular, was so densely lined with feathers that I mistook it for that of a Little Grassbird and it was not until I removed the young for banding that I realized my error. There are differences in the construction of the outer nest which should preclude such mistakes; additionally, the Reed-Warbler appears to use only light-coloured feathers, not the dark ones used by the Little Grassbird, and it also places all feathers "horizontally" in the lining, whereas the Little Grassbird invariably conceals the nest aperture with "vertically"-placed feathers curved inwards.

Reed-Warblers were frequently watched gathering beakfuls of water-weed and conveying them to the nest under construction. The type of weed used was that which floats in dense, green masses on shallow water, and which forms a continuous, brown mat over drying mud and vegetation when left by receding waters. Such weed is invariably impregnated with a considerable amount of fine mud which, as the weed dries, hardens and combines with the contracting vegetable tissues to form a material similar to cardboard or fibroplaster. Reed-Warblers were watched placing damp weed with the reed-mace fluff that usually forms the base of the nest and also working it into the outer walls of the nest, particularly twisting it around the "basket-handles" which held the nest to the reed-stem supports. As it hardened and dried it served to bind and consolidate the other nest mat-

erials. Not all nests contained this weed, its use and the quantity used apparently depending on its availability in the vicinity of the nest. Other nests, containing a high percentage of water-weed, were very firm in construction and appeared to have been reinforced with plaster. An extreme nest of this type has already been described by A. H. Chisholm (1951).

The Reed-Warbler has mastered the "basket-handle" technique of suspending its nest on reed stems. The Little Grassbird has not the same ability and places its nest in branches of shrubs growing in water or builds it into clumps of broken-down reeds or other aquatic vegetation. I was therefore surprised to find a number of nests, outwardly similar to those of the Reed-Warbler, but lined in the Little Grassbird fashion and containing eggs of the latter species. All of these were in the newer reed-beds, where growth was open and there was no matted vegetation. One such nest was pulled to pieces, and it was found that the structure was formed of two nests. A complete nest of the Little Grassbird had been constructed on top of a disused Reed-Warbler's nest. The two nests merged perfectly into one, the Grassbird had even constructed a thickened extension to the base of its nest to fill the cup of the Reed-Warbler's nest. Despite this, the material of the two nests was not interwoven and the two could be readily separated. Six other similar nests were also examined. Another nine nests of the Grassbird were found built in or on Reed-Warblers' nests but the architecture was not of such a high standard, the nest being in some cases little more than an addition of coarse grasses plus the typical feather lining. Another examined had apparently had a feather lining added without further nest construction. Six Grassbirds' nests were found built on top of platforms which appeared to be partially constructed or old and broken-down Reed-Warblers' nests.

Thus, of 90 nests of the Little Grassbird examined, 23 were cases of nest-appropriation of Reed-Warblers' nests. It is of interest that examples of the various degrees of nest-appropriation were all in use at the same time and place; i.e. the utilization of an old or incomplete nest as a platform or support, the construction of a complete nest in a disused one, and new construction varying from an almost complete nest to the mere addition of a lining.

N. L. Roberts, in his paper dealing with Australian nest-appropriators (1955), did not mention the Little Grassbird. It is highly improbable that only Grassbirds in the Dareton district have acquired the habit. Few bird observers make a practice of pushing through reed-beds pulling nests apart, but it is possible that the habit is more prevalent, and therefore more easily discerned, at Dareton where the reed-beds, at the time of my investigations, were relatively new and open with few of the more normal nest-sites present in older reed-beds.

C. C. Lawrence has already drawn attention (1948) to the fact that, on occasions, the Little Grassbird will build a nest without a lining of feathers. In 1955, at Tullakool, New South Wales, I found a nest with only a grass lining, and two at Dareton in 1961. The Tullakool nest was built in a very small swamp where Swampheens, Moorheens and similar species were absent; feathers from those birds are much used by Grassbirds. However, there was no scarcity of swamp birds at Dareton. The above three nests contained eggs when found. The reason for this variation in nest-building is obscure.

A somewhat intriguing nest was found at Dareton: it was situated in a small, dead bush growing in a reed-bed and the outer shell, fully constructed, was placed in a fork about a foot above water-level. It was completely unlined, but otherwise appeared to be a typical nest of the Little Grassbird. A foot to the left of it, in another fork, was a tight mass of feathers which on examination proved to be a typical Grassbird nest-lining, even to the vertical feathers concealing the top of the cup. There was nothing to indicate that the nest-lining had been removed intact from the main structure and it was apparent that, by some amazing technique, the bird, or birds, had contrived to form a complete nest-lining without the support of the outer walls. Cases of multiple nest-building, usually in unnatural sites, are not uncommon. N. L. Roberts (1945) cites a case of a pair of Willie Wagtails (*Rhipidura leucophrys*), where each bird of the pair built a complete and separate nest. If the Little Grassbirds had acted as had these Wagtails, and been confused or disagreed as to the correct nest-site, it would be expected that each would have built a complete nest. Could it be that, with Little Grassbirds, one sex is responsible for the nest shell, the other for the lining? Highly improbable, perhaps, but at least it would explain this strange nest-duplication and suggest a reason why occasionally the nest-lining is omitted completely.

#### REFERENCES

- Chisholm, A. H., 1951. Reed-Warbler's "fibro-plaster" nest. *Emu*, 51: 133.  
Lawrence, C. C., 1948. Nests of Little Grass-birds. *Emu*, 47: 370-372.  
Roberts, N. L., 1945. Multiple nest-building. *Emu*, 45: 90.  
Roberts, N. L., 1955. A survey of the habit of nest-appropriation. *Emu*, 55: 110-126, 173-184.