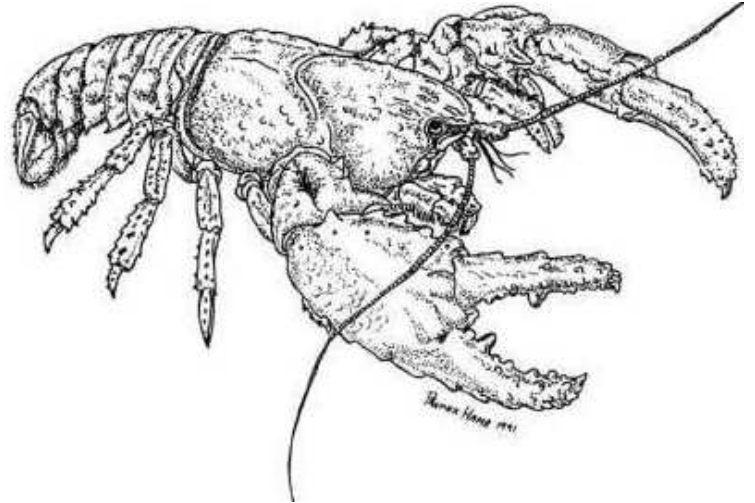


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The Australian pelican: a bird of superlatives

by **Sarah Lloyd**



Three pelicans

With mesmerising grace a flock of pelicans floats above the woodlands, all the while retaining a V formation until they are no more than specks on the horizon.

What seems amazing about Australian pelicans (*Pelecanus conspicillatus*) is not that they fly far from water, but that such bulky birds can fly at all. Like other birds, however, they are superbly adapted to their lifestyle with some fascinating internal structures and interesting strategies for weight reduction.

Birds' bones, unlike the bones of mammals that are filled with marrow, must be light enough for flight. They are pneumatic (i.e. filled with air) and the lifestyle of the bird - how much it flies or dives - determines the degree of pneumatisation. Pelicans, therefore, are not nearly as heavy as they appear. Their skeleton is more pneumatic than that of other birds and weighs a mere 10% of their total body weight of around 5 kg. Relative to their size, pelicans are among the lightest birds. The Australian pelican, although not the largest of the eight pelican species that occur worldwide, boasts the longest bill.



Australian pelicans have huge wingspans of 2.4 metres. To conserve energy they sometimes glide low over water, taking advantage of the 'ground effect' whereby extra lift is provided by air funnelled between wings and water.



Pelican flying

They are unable to sustain long periods of flapping flight, but can stay airborne for 24 hours, riding the thermals and reaching stunning heights of 3000 meters. From such elevations they can keep a lookout for productive waterways and suitable places to breed.

There are several breeding colonies on the Bass Strait Islands but they are miniscule compared with the massive ones that occur periodically on some of the ephemeral lakes and wetlands on the Australian mainland. In June 2000, for instance, 7500 Australian pelicans were counted at the Mandora Marsh in Western Australia, a wetland that may flood only once a decade. For breeding to be successful pelicans must be assured of an undisturbed site that is rich enough to provide food for their growing chicks for at least three months. Unfortunately, the Bass Strait Island colonies are so close to the Tasmanian mainland that they are prone to disturbance from unwelcome visitors.

Pelicans sit high in the water. Their buoyancy is achieved by a special layer resembling bubble wrap that lies under the thin skin of most of their body. Because they float so high, they generally feed in shallow water and often in cooperation with other pelicans. Gatherings of nearly 2000 birds have been observed herding fish, concentrating shoals into a small area before scooping them up with their massive pouches. They are opportunistic feeders and will eat fish, crustaceans, ducklings or gulls and even the occasional small dog!

Pelicans have yet another strategy for weight reduction: if disturbance requires a rapid getaway, they can completely disgorge their stomachs which shrink to walnut size. Then they slowly flap their wings and with their totipalmate feet (i.e. with all four toes connected by webs) treading in unison on the surface of the water, they laboriously take off, before once again achieving mastery of the air.

Further reading:

- [Aonline](#)
- [Parks Tasmania](#) (.pdf)
- Halse, S.A., Pearson, G.B., Hassell, C., Collins, P., Scanlon, M.D. Minton, C.D.T. (2005) *Mandora Marsh, north-western Australia, an arid zone wetland maintaining continental populations of waterbirds*. In *Emu* Vol. 105 No 2. CSIRO Publishing on behalf of RAOU.
- Milewski, A.V. (2006) 'Give dues to our world-record bin-bird'. In *Wingspan* Vol. 16 No.2 June 2006, Birds Australia (Royal Australasian Ornithologists Union), Melbourne.

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