

Feather Fascination!

with local Birdwatcher,
Jim Butler

Flying Cows!

LAST year I went birdwatching in Ecuador with my nephew. In three weeks we saw 500 new birds! One of them was the Hoatzin, the oddest bird in the Amazon Basin. The Hoatzin is a strict herbivore, just like a cow! And the Hoatzin's digestion has more in common with cows than birds because it is the only bird known to possess a foregut containing anaerobic bacteria able to break down the otherwise indigestible plant cellulose by fermentation. To derive sufficient life energy from plant fibre Hoatzin have evolved a hefty fermentation chamber which means it must rest for hours with an engorged crop to complete digestion, like a cow. To accommodate the chamber the flight muscles have been reduced making it a very feeble flier. An easy target for hawks and snakes.

The Australian Wood Duck is also a strict herbivore but hasn't gone the Hoatzin route. Instead it has two morphological specialisations (bill and legs); and one physiological specialisation. When the bill is closing the lamellae produce a scissor-like action which efficiently cuts grass. And its legs are adapted for walking about on land and for foraging and



grazing on grasses and shrubs like a goose; hence its common name 'Maned Goose'. They will only take to open water when threatened.

The Wood Duck obtains most of its energy from the easily digested plant cell contents. However, a significant quantity of its energy is derived from the digestion of the fibre in the cell walls. The Wood Duck's physiological specialisation is the efficient breakdown of a specific fraction of the fibre, hemicellulose. This selective digestion of fibre doesn't require a heavy fermentation chamber. This is of particular benefit to this wide-ranging and strong-flying duck (Peter Fullagar listed 21 Aboriginal names) enabling it to exploit the wide-spread, eruptive vegetation provided by the scattered ephemeral swamps and lakes particularly in the interior of Australia.

Kind Regards,

~ Jim

Contact Jim: beautifulbirds@y7mail.com Image: Australian Wood Ducks by
Digital Bird Guide: <http://www.moggillcreek.org/> Ed Frazer at Brookfield