



The Pukeko



Pukeko are very common New Zealand birds. They can be seen alongside roads, in creeks and streams and at **urban** park areas. They are found throughout New Zealand and are one of the most widespread birds and are easily recognisable by their **iridescent** purple body feathers, long orange legs and bright red front shield and beak. On average they are 40 cm in height and 1 kg in mass but males are usually slightly larger than females. Pukeko have long legs, long finger-like toes and large feet; these all help them to walk across swampy wetlands and stops them from sinking into muddy ground or streams when looking for food. While they have large black feathered wings they rarely fly, preferring to wade in the water, swim and run. When they do fly it is very clumsy looking and is usually for only short distances. Like most birds they have many features that enable them to fly which include: hollow bones to make them lighter, large wing muscles (around 15% of their body's mass) and they get fresh air when they inhale and exhale plus they have high **respiratory** rates which allows them to get more oxygen to release more energy.

Pukeko prefer to live in open areas rather than tree-filled spaces. They have spread rapidly and numbers ballooned with the removal of forests for **agricultural pastureland**. Pukeko feed on the ground mainly eating grasses and young plants and the shape of their beak makes it ideal for tearing **foliage**. They also eat frogs, insects, eggs, fish, small mammals (like mice) and other birds (like ducklings). The **pancreas** produces **enzymes** that helps them break down their food and release the **nutrients**. This is more effective than many mammals because they don't have teeth to start the **digestive** process off. A human's **bile** is **alkaline** to help **neutralise** the stomach acid but a bird's is acidic, which aids the breaking down of food. Pukeko don't have a bladder so they don't urinate. Instead they have runny faeces which contain **uric acid** made by the kidneys. In comparison, humans produce urine in the kidneys which removes the same waste product of urea from the body.

During the breeding season, they feed their chicks on other animals as they are a protein-rich food source that helps them to grow quickly. They form groups and live together to raise their young and defend their territory. The Pukeko mate and lay their eggs (up to 6 each) in a **communal** nest (that can take up to 18 eggs) where they share the jobs associated with raising the young including: sitting on the eggs, defending the chicks, feeding the chicks and protecting the nest area. Pukeko eggs are light tan with brown speckles which helps them to camouflage into their ground nests which are formed in flattened grasses or reeds. After hatching, the chicks are fed for two months by the adults. They are very different in colouring to the adults and it isn't until around three months of age and adult size that they develop the **iconic** violet plumage and **radiant** red beaks. As youngsters they have dull grey-black feathers and grey legs, beaks and face shields to identify them as young so the adults don't fight them. It makes them less aggressive looking. Adult pukeko are quite **aggressive** and will fight any invaders to their area which includes pulling the heads off ducklings to prevent the duck population from increasing which would add extra competition for food. Pukeko use a variety of calls to mean different things. A loud shriek is used to warn off predators, small yips are used between adults and chicks and deeper hoarse calls when fighting each other. They also communicate using their white under-tail feathers which they flick when disturbed to warn other members of the group. When a neighbouring group of Pukeko invades their space they make lots of loud shrieks, flick their tail feathers, puff their chests up, show off their beaks and face shields and if necessary bite and kick. Pukeko have very few predators and are mainly attacked and killed by hawks when young. As adults, they will attack predators and have been seen biting and kicking cats and stoats, especially when the nest or chicks are threatened.

