

Jacana jacana (Wattled Jacana or Tek Teky)

Family: Jacanidae (Jacanas)

Order: Charadriiformes (Shore Birds or Waders)

Class: Aves (Birds)



Fig. 1. Wattled jacana, *Jacana jacana*.

[<http://www.arthurgrosset.com/sabirds/wattled%20jacana.html>, downloaded 31 October 2011]

TRAITS. The wattled jacana is also known as spurwing or lily trotter. Distinguishable by their bluish grey, long legs and elongated toes allowing for even distribution of body weight and their characteristic ability of walking on floating aquatic vegetation (Fig. 1) (De Schauensee, 1971). Short tail, length: 17-53 cm (Terres, 1980), weight: 40-230 g (Perrins, 2003), short wings; weak flyers (Perrins 2003). Colour: Adults: black head, neck and under parts with chestnut-brown, back, tail and wing-coverts; pale lemon-green to bright yellow flight feathers with brown tips, dark brown eyes, yellow bill curved at the tip with red wattles and red, lobed, frontal shield up to forehead (Kenefick et al., 2007). On the bend of each wing there is a yellow thorn or spur (Terres, 1980). Juveniles (Fig. 4): white under parts, bronze-brown plumage above (wings and back) (Ffrench, 1973), black nape, no wattles (develops frontal shield as they mature), yellow bill (Kenefick et al., 2007), pale yellow eyes, striking white eyebrow or white stripe that traverses the forehead to the hind neck (Bouglovan, 2011). Sexual dimorphism is not immediately evident (Perrins, 2003); however, females are larger than males (Terres 1980) and

possess a blue-grey colouring on the perimeter of their head shields (Bouglouan, 2011). There are also disparities between the sexes with regard to wing and spur length (Osborne and Bourne, 1977). Eggs (Fig. 3) are golden brown with black markings criss-crossed over the surface (Ffrench, 1973) with a glossy finish (Bouglouan, 2011).

ECOLOGY. Wattled jacanas inhabit tropical and sub-tropical regions in still or slow flowing bodies of water (Perrins, 2003) such as wetlands with floating vegetation, utilized for protection and feeding. These include freshwater marshes, rivers, swamps (Terres, 1980) and rice fields (Perrins, 2003). Mainly carnivorous; their main food sources are molluscs, insects, small fish, other invertebrates and sometimes seeds of aquatic plants. Plant matter (seeds) comprises only 20% of their diet by volume and invertebrates (such as beetles, grasshoppers and crickets) the remaining 80% (Osborne and Bourne, 1977).

SOCIAL ORGANIZATION. Can be found in flocks or loosely organized communities; rather sociable (Ffrench, 1973). They are sometimes seen in short flights together (legs dangled beneath them) then landing as a group (Ffrench, 1973). They are quite territorial while breeding which coincides with the wet season but can congregate into large flocks in the dry season; they often display uplifted wings to other members of their community (Bouglouan, 2011). Females head the hierarchy, with males primarily responsible for incubation of eggs, chick care and defence of juveniles (Emlen and Wrege, 2004). In a study conducted by David R. Osborne and Godfrey R. Bourne in 1974, the average territory size of a mated pair was approximately 1.1 hectares on which they spent approximately 52% of their time.

ACTIVITY. There is very little published information regarding the daily activity of wattled jacanas. However, they are primarily sedentary but engage in short stints of movement in times of water scarcity (Bouglouan, 2011). Though they are not essentially migratory (Terres, 1980), they are opportunistic travellers; moving to take advantage of flooded areas (Perrins, 2003). They spend majority of their time foraging (approximately 80%) and about 43% of this foraging is done as a mated pair (Osborne and Bourne, 1977). Before nesting, males spend majority of their time on territory and less than 5% preening and substrate pulling (gathering materials for nest building by throwing uprooted vegetation backwards over shoulders) and both activities significantly increased after egg laying (Osborne and Bourne, 1977).

FORAGING BEHAVIOUR. Majority of their time (80%) is spent foraging (Fig. 5) during periods when eggs are not being laid (Osborne and Bourne, 1977). They engage in two types of foraging behaviour: gleaning and feeding deep (Osborne and Bourne, 1977). Gleaning: they occasionally wade through open water (Restall et al., 2006), walk skilfully at a moderate speed on floating vegetation (Osborne and Bourne, 1977) or use short flights to jump over floating vegetation (Perrins, 2003) to peck at seeds, small insects and other invertebrates on the vegetation's surface. Feeding deep: they remain still and place their bills in the water to peck at food below the surface (Osborne and Bourne, 1977). Wattled jacanas have also been known to use their feet to turn over floating leaves and pull up roots (Bouglouan, 2011) to peck at molluscs and other food sources below and may dive into the shallow waters in search of food. During times when eggs are being laid, males spend less time foraging and most of their time incubating the eggs (Osborne and Bourne, 1977). They exist in an interspecific relationship with capybara from whose back they remove ticks for consumption (Restall et al., 2006).

COMMUNICATION. Olfactory Communication: There was no published information on chemical communication via the olfactory system in wattled jacanas as birds are generally believed to be anosmic and in some cases microsmatic (Caro and Balthazar, 2010).

Visual Communication: They are known to engage in “wing waving” with conspecifics where the yellow underwing is repeatedly exposed by rapid flapping of wings (Ffrench, 1973). Mates also perform a hovering action; “teetering”, in response to invasion by foreign conspecific individuals and families where they remain 30 m apart and pace back and forth (Osborne and Bourne, 1977). Aggressive displays are made towards rival females by exposing spurs and uplifting wings (Fig. 2) (Terres, 1980).

Vocal Communication: wattled jacanas have been known to engage in various noisy, frenzied chatter (Ffrench, 1973) as well as high, squeaky, sharp squawks (Perrins, 2003). “Grunting, cackling, mewling, whistling” (Terres, 1980). They are considerably noisy during foraging, courtship and in the presence of imminent danger where they emit a high pitched “kee-kee-kee-kee...” (Restall et al., 2006). They also emit high pitched reprimands (Torres 1980) in defending territories and against sexual rivals especially during aerial pursuits (Osborne and Bourne, 1977). Soft mewling calls are made between mates as well as between young chicks and males; these calls become louder when mates are no longer in close proximity (Bouglouan, 2011).

SEXUAL BEHAVIOUR. Breeding takes place coming to the end of the wet season (Restallet al., 2006) when food availability is not an issue. Both sexes are involved in determining the location of the nest site but the nest is constructed primarily by the male (Osborne and Bourne, 1977) and comprises of meticulously placed weeds and stems on and between floating vegetation (Ffrench, 1973). Sexual roles in wattled jacanas are reversed with females being the dominant sex (Emlen and Wrege, 2004), displaying their dominance by pecking about the neck and body of males who crouch in response. Females are described as polyandrous; mating with multiple males (up to four) (Perrins, 2003). In courting, females sought males in distinct locations on their territory, but this did not always lead to coupling (Osborne and Bourne, 1977). Areas of successful coupling were later observed as nest sites (Osborne and Bourne, 1977) Average clutch size: 3-5 eggs (usually 4) (Ffrench, 1973) which males would incubate for approximately 25 days (Emlen and Wrege, 2004).

JUVENILE BEHAVIOUR. There is very little published information regarding juvenile behaviour in wattled jacanas. Young chicks are precocial; with the ability to feed and care for themselves (Bosque and Herrera, 1999); they can be observed walking within few hours of hatching and remain on the territory until they can fly (Emlen and Wrege, 2004). Foraging ability is taught by the male parent (Emlen and Wrege, 2004) with who the chicks remain for approximately 50-60 days after birth (Emlen and Wrege, 2004). Juveniles are known for their peculiar antipredator behaviour (see below).

ANTIPREDATOR BEHAVIOUR. If imminent danger is perceived, wattled jacanas immediately freeze to assess the threat (Terres, 1980). Though the colour of their plumage makes them rather eye-catching, they can go unnoticed; disappearing into the vegetation camouflaged in their wetland habitat (Perrins, 2003). These birds are also known to swim away and young chicks usually dive underwater, remaining completely immobile for long periods of time with

only a small portion of their bills exposed vertically above the water's surface, as a makeshift snorkelling device (Bosque and Herrera, 1999). The bright yellow thorns (spurs) on the bend of each wing are also used in fighting and in aggressive displays; where wattled jacanas stand upright; their wings uplifted and outstretched behind them, and in some cases, make loud noisy chatter (Terres, 1980). Females play an active role in predator defence, once males issue alarm calls, females take action and both sexes may sometimes advance to attack predators such as the long-winged harrier (Osborne and Beissinger, 1979). Males also exhibit "decoy" behaviour where they may engage in an incessant, loud rattling while crouched down, erratically flapping their wings, feigning injury (in some cases a broken wing) drawing predators away from chicks after which, males fly away (Ffrench, 1973). When chicks are in danger, males sometimes carry chicks under their wings to a safer location (Perrins, 2003).

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Fig. 2. Threat display in territorial wattled jacana.

[<http://www.fmnh.org/tanzania/species.asp?ID=314>, downloaded 31 October 2011]



Fig. 3. Wattled jacana eggs camouflaged in wetland.

[<http://www.oiseaux-birds.com/card-wattled-jacana.html>, downloaded 31 October 2011]



Fig. 4. Wattled jacana juvenile.

[<http://www.oiseaux-birds.com/card-wattled-jacana.html>, downloaded 31 October 2011]



Fig. 5. Adult wattled jacana foraging.

[<http://ibc.lynxeds.com/photo/wattled-jacana-jacana-jacana/eating>, downloaded 31 October 2011]