

## *Anolis wattsi* (Watts' Anole)

Family: Polychrotidae (Anoles and Tree Lizards)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



**Fig. 1.** Watts' anole, *Anolis wattsi*.

[<http://reptile-database.reptarium.cz/species?genus=Anolis&species=wattsi>, downloaded 6 March 2015]

**TRAITS.** *Anolis wattsi* are small, multi-coloured lizards, with males growing to a body length of 58mm and females up to 46mm, and often hold their tails in a curved raised “scorpion tail” position. This species is the only one of its kind in Trinidad and Tobago with varying physical appearance between the sexes. The adult male has varying colours of orange, brown or olive on the body, their head may have blue tints, and a pale yellow belly (Fig. 1). Females (and juveniles) are duller in colour, with pale mid-dorsal and flank stripes (Fig. 2) (Schwartz and Henderson, 1991).

**DISTRIBUTION.** *Anolis wattsi* is endemic to the Caribbean Lesser Antilles, native to Antigua, and was introduced to Trinidad and Tobago, St. Martin and St. Lucia (Fig. 3). *A. wattsi* is invasive to Trinidad with a localized distribution (Cabi, 2016), first observed in pineapple plants imported from Antigua in the Caroni (1975) Research Station in November 1992. The establishment of *A. wattsi* in west central Trinidad has been increased by jump dispersal, as individuals are moved over a large geographical distances and have successfully reproduced in the new areas (Fig. 4) (White and Hailey, 2006).

**HABITAT AND ACTIVITY.** *A. wattsi* is exophilic and mesophilic (Schwartz and Henderson, 1991) meaning that it lives outside human domestic environments and under moderate temperatures. *A. wattsi* is diurnal, indicating that they are active at day with most of their time dedicated to foraging, and sleeping at night. *A. wattsi* is found in microhabitats on the ground under wet and shady trees, manmade fences and walls. Females and juveniles perch on the ground while males perch up to 1m off the ground. *A. wattsi* are observed in holes and small crevices (Lazell, 1980) in urban, suburban and agricultural areas (White and Hailey, 2006). Its activity is highest at 6am and afternoon at 6pm and lowest during midday. At this time *A. wattsi* increases its perch height to avoid predation and aggression by larger lizard species (Kolbe et al., 2008). This species is abundant in small home ranges of approximately 1.8-9.5m<sup>2</sup> (Bennett and Gorman, 1979).

**FOOD AND FEEDING.** *A. wattsi* lurk on low lying structures such as the bark of trees and walls to catch prey. Its prey consists of live insects and invertebrates found on twigs, bark, agaves and rock crevices. *A. wattsi* also feed on soft mangoes and other fruits.

**POPULATION ECOLOGY.** It is abundant in appropriate habitats at a density of 440-5,680 per hectare (Cabi, 2016). In the presence of the larger species *Anolis aeneus*, *A. wattsi* increases its perch height and could be found more in shady areas and on trunks. Juveniles spread through urban areas at a rate of 100m per year, increasing the distribution range of invasive populations.

**REPRODUCTION.** The females of *A. wattsi* lay a clutch size of one egg (Durso, 2013), at 2 week intervals in productive habitats throughout the year. They bury their eggs in shallow soil on the ground (Daltry, 2009).

**BEHAVIOUR.** Male and female densities are much higher on rock piles due to increased safety from predators and better thermal regulation. Intersexual interactions between males increase as they become territorial in rocky areas, therefore sexual selection of males depends on the habitat type. *A. wattsi* is fast growing, adapts well to different environments, and is a habitat generalist.

**APPLIED ECOLOGY.** *A. wattsi* is not listed by IUCN and is not a threatened species as it is abundant in its native environment with a wide distribution, wide range of tolerable habitats, and a large population size. Invasive populations may be considered as pests as they may spread lizard malaria parasites (*Plasmodium azurophilum*) (Schall, 2016). *A. wattsi* may be controlled by the introduced mongoose (predator), use of pesticides, or hand capture (Daltry, 2009).

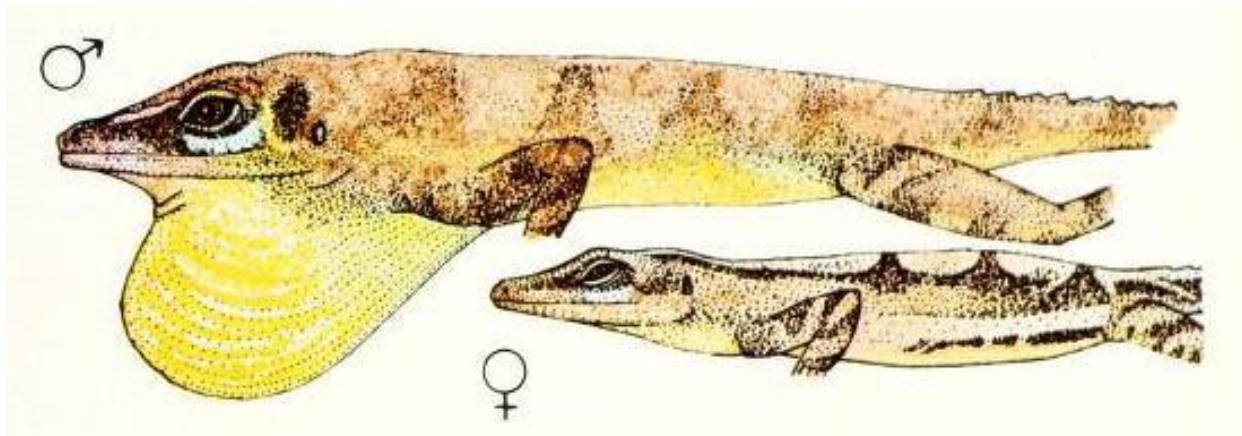
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**Fig. 2.** Watts' anole, male and female differentiation.

[<http://www.anoleannals.org/wp-content/uploads/2013/06/A-wattsi1.jpg>, downloaded 6 March 2016]



**Fig. 3.** Watts' anole geographic distribution.

[<http://www.discoverlife.org/mp/20m?map=Anolis+wattsi>, downloaded 7 March 2016]

The establishment of *Anolis wattsi* as a naturalized exotic lizard in Trinidad

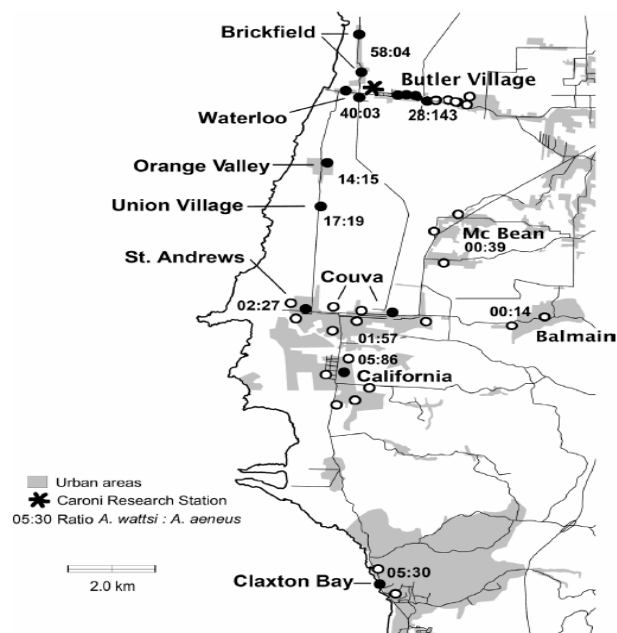


Figure 2. Survey sites with (●) or without (○) *A. wattsi*, in relation to roads and urban areas.

**Fig. 4.** Watts' anole distribution in Trinidad (2006).

[[https://www.researchgate.net/profile/Adrian\\_Hailey/publication/233701186\\_The\\_establishment\\_of\\_Anolis\\_wattsi\\_as\\_a\\_naturalized\\_exotic\\_lizard\\_in\\_Trinidad/links/09e415114110213deb000000.pdf](https://www.researchgate.net/profile/Adrian_Hailey/publication/233701186_The_establishment_of_Anolis_wattsi_as_a_naturalized_exotic_lizard_in_Trinidad/links/09e415114110213deb000000.pdf), downloaded 6 March 2015]