The elegant skink (*Plestiodon elegans*, formerly *Eumeces elegans*; Griffith, Ngo and Murphy, 2000; Schmitz, Mausfeld and Embert, 2004; Smith, 2005; Okamoto et al., 2006), occurs in eastern China (Pope, 1929), Taiwan, and the Diaoyutai (=Senkaku) Archipelago (Hikida, 1993). In Taiwan, they inhabit primarily areas disturbed by anthropogenic activities and open mountainous areas at elevations below 2500 m (Shang and Lin, 2001; Lue, Tu and Shang, 2002).

The brown anole (*Anolis sagrei*) (Fig.1) is an exotic invasive lizard species in Taiwan (Norval et al., 2002; Chang, 2007; Norval et al., 2009). Ongoing research in Taiwan, has indicated that this species is increasingly becoming part of local ecosystems, both as predator (Huang et al., 2008; Norval et al., 2010) and prey (Norval, Mao and Chu, 2004; Norval, Huang and Mao, 2007; Norval and Mao, 2008; Chiu et al., 2011; Norval et al., 2011), in areas disturbed by anthropogenic activities.

On the 05th of March, 2012, at ca. 11:35, a young adult male *A. sagrei* (ca. 45 mm SVL) was observed ascending the painted base of one of two utility poles, that were planted next to each other, on the side of a tarred road, bordering a coffee (*Coffea arabica*) field in Santzepu, Sheishan District, Chiayi County, Taiwan (23°25'50"N, 120°28'50"E; datum: WGS84) (Fig.2). The lizard was moving fairly quickly, and when it reached a height of ca. 50 cm above the ground, it lost its grip and dropped down to the ground. When it reached the ground it immediately leaped back onto the pole and ascended quickly.

At the same time, an adult male *P. elegans* (ca. 85 mm SVL) emerged from among the cracks and fissures at the base of the poles, and attempted to pursue the anole up the utility pole. Since, unlike the *A. sagrei*, it lacked subdigital lamellae, it was unable to ascend...
the pole higher than its own SVL. When the *A. sagrei* entered a mounting bracket hole on the side of the pole (ca. 150 cm above the ground), the skink gave up and re-entered the fissure from which it had emerged.

It is not clear why the *P. elegans* pursued the *A. sagrei*. The diet of *P. elegans* is poorly reported on, so it is not certain whether these skinks are saurophagus, but since the *A. sagrei* was fairly large, it is our opinion that predation was most likely not the reason. *Plestiodon elegans* is territorial, and males are aggressive towards each other. Territorial aggression is thus more likely the reason for the observed interaction. Aggressive interactions as described herein, irrespective of the reason, between *A. sagrei* and native species are ecologically important.

*Anolis sagrei* is sexually dimorphic, and the males tend to be relatively larger than the females due to a bigger growth spurt and continued investment in growth, as opposed to the females who also allocate part of their acquired energy to egg production (Schoener and Schoener, 1978). In Santzepu *A. sagrei* exceeds the maximum sizes of conspecifics from their native range (Campbell and Echternacht, 2003), which means *A. sagrei* in Santzepu area are capable of preying on larger prey items, including the young of other saurians (Campbell and Gerber, 1996; Gerber, 1999; Norval, 2007). This can have far-reaching consequences. Studies involving the green anole (*Anolis carolinensis*) and the Ogasawara snake-eyed skink (*Cryptoblepharus nigropunctatus*) have found that the anoles, which are of a similar size as the skinks, had a negative impact on the skinks through competition for prey and predation on the hatchlings (Toda et al., 2010, and the references stated therein), and it is possible that large *A. sagrei* can have similar impacts on similar and smaller sized native lizards in Taiwan. Studies in the Bahamas and Bimini have found that in the presence of competition and/or predation *A. sagrei* tends to be more arboreal, which results in reduced foraging opportunities.

![Figure 2. A view of the utility poles (red arrow) and surrounding habitat where the observations were made in Santzepu, Sheishan District, Chiayi County (photographed by Gerrut Norval).](image-url)
and a subsequent reduction in the sizes of these lizards (Schoener and Schoener, 1978; Schoener, Spiller and Losos, 2002; Losos, 2009). Although it still has to be verified empirically, there are indications that where *A. sagrei* is sympatric with a diversity of saurians (especially potential predators and/or competitors) in Taiwan, *A. sagrei* tends to attain smaller body sizes (Norval and Mao, pers. observ.). A reduction in the sizes of *A. sagrei* males would mean that the young of native lizards are less likely to fall prey to them, and at the same time would put the *A. sagrei* males within the prey size range of saurophagous species such as the long-tailed skink (*Eutropis longicaudata*, formerly *Mabuya longicaudata*) (Norval, Mao and Chu, 2004), while also reducing the ability of *A. sagrei* to compete with other sympatric saurian species (Schoener, Spiller and Losos, 2002).

The conservation of saurians in areas disturbed by anthropogenic activities in Taiwan requires special attention, since species, such as *P. elegans*, that can be human commensals, may be instrumental in mitigating the impact of *A. sagrei* on native ecosystems. People should be informed to not only be more tolerant towards saurians in urban areas, but also to reduce the impact on saurians by their pets, especially domestic cats (*Felis catus*), which may prey on them (Lee, 2007).

As far as can be determined, this appears to be the first reported description of an aggressive interaction between a *P. elegans* and an *A. sagrei* in Taiwan.

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**References**


