

## An Accidental Importation of an Afrotropical Anthropophilic Lizard (Squamata: Agamidae: *Agama lebretoni*) into Spain

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On 27 March 2015 a timber shipment from Douala, Cameroon, sent by boat through a harbor of Equatorial Guinea, arrived at the harbor of Valencia in eastern Spain. Valencia harbor staff caught a live lizard among the logs and informed the Reception Centre of Urban Avifauna and Exotic Animals (RCUAEA) of the Municipality of Valencia.

The lizard shows a stout habitus, a snout–vent length of 130 mm, a nostril located on the canthus rostralis, tufts of spiny scales behind tympanum and on the sides of the neck, flank scales homogeneous in size, about 45 vertebral scales between fore- and hind limb insertions, keeled scales under the base of the tail, throat with a reticulated pattern of red-orange lines, and absence of a prominent black spot on the base of the throat (Figures 1 and 2). Based on these morphological and chromatic characters, we identified it as an *Agama lebretoni* Wagner, Barej and Schmitz, 2009. This recently described species is a member of the *Agama agama* complex and is found in southern Nigeria, Cameroon, Equatorial Guinea and Gabon (Wagner, Barej and Schmitz, 2009; Trape et al., 2012). The individual was still alive at the time the present note was submitted and will be preserved in ethanol as a voucher in the RCUAEA.

Members of the *Agama agama* complex show extreme levels of anthropophily and of dietary and ecological plasticity (Pauwels et al., 2004; Delsinne et al., 2015). Their invasive potential is remarkable. Schembri and Schembri (1984) reported the finding in Marsa, Malta, of a live female *Agama agama* amongst beer crates probably imported from North Africa, but no established population is so far known on the island. Specimens of *Agama agama* have been photographed at Antanana-

rivo airport, but the species does not yet seem to have established itself in Madagascar; however it did in Moroni, Grande Comore (Carretero et al., 2005; Wagner, Glaw et al., 2009). *Agama agama* has been introduced in Palermo harbor in Sicily, probably with logs, but it did not establish a population on the Italian island (Lillo, 2008). It has been introduced also to Réunion Island, where it established reproductive populations (Guillemet et al., 1998; Sanchez and Gandar, 2010). Vasconcelos et al. (2009) reported an individual found dead in Porto Novo harbor in Cape Verde Islands, and since then, several populations seem to have established themselves (Vasconcelos et al., 2014). The species has also established populations in Florida (Enge et al., 2004). Some of the pre-2009 reports, i.e., before the description of *Agama lebretoni*, might be attributable to the latter species and should be re-evaluated.

The present note is the first report of an accidental introduction of a member of the *Agama* genus in continental Spain. Valencia is characterized by a semiarid climate with very mild winters (Millán et al., 2005), and it is possible that *Agama* might be able to locally survive. The risks linked to additional introductions of *Agama* in Spain and potential population establishment include competition with and predation on, native species, and transmission of pathogens to native species and humans. Members of the *Agama agama* group are indeed known to be vectors of pathogenic agents (see among others Collard et al., 1957; Enweani et al., 1997; Bélard et al., 2007). These risks could be limited by increased screening by port authorities, both at the sending and reception harbors, of goods that are potential pathways of introduction of alien species.



Figure 1. Laterodorsal view of an adult *Agama lebretoni* caught at Valencia harbor, Spain. Photograph by V. Sancho.



Figure 2. Ventral view of an adult *Agama lebretoni* caught at Valencia harbor, Spain. Photograph by Juani López.

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