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Frazier & Matyot (2010; *BZN* **68**: 140–143) have attempted to sideline the putative lectotype of the Aldabra tortoise, the Leiden specimen collected by Dussumier, by

arguing that it cannot be considered suitable as its provenance is uncertain on both historical and genotypic (DNA) grounds. In relation to the correct name for the species in question, there are two issues they have not considered.

1. If they are correct that the uncertain provenance of RMNH 3231 makes this specimen an unsuitable lectotype, it follows that the next available name, i.e. *Testudo elephantina* Duméril & Bibron, 1835 should be (re-)adopted, its type locality restricted to Aldabra by Günther in 1877 (see Bour & Pritchard, BZN 66: 169–174, 2009). Their arguments provide no support for, nor have they any bearing on, the conservation and continued use of *Testudo gigantea* Schweigger, 1812 for the Aldabra tortoise, a move Frazier himself initiated. That decision depends entirely on the status of a quite different specimen, MNHN 9554, and the Commission's verdict on that, as discussed in numerous previous submissions in relation to this case.

In that context it should be noted that quite recently a Portuguese scholar, Luis Ceriáco, examined MNHN 9554 in connection with a study on the surviving specimens from the former 'Cabinet d'Ajuda' in Lisbon. He concluded that this tortoise is clearly stuffed in the manner used for large specimens in that establishment at the end of the 18th century (Roger Bour, pers. comm. 13 September 2011). This is a new element adding to the already very strong evidence that this specimen is the very Brazilian tortoise 'e collectione regia Libonensi' described by Schweigger in 1812 as *Testudo gigantea*.

It is certainly unfortunate when the rediscovery or re-identification of a type transfers a familiar name to a different species, but as I and others have commented before (e.g. BZN 67(1):79–81), the same process with the Galapagos tortoises, equally iconic, did not incur the extraordinary reaction (and polarisation) that has been spawned by Case 3463, nor indeed any of world-wide confusion predicted for the Aldabra case. Why are people prepared readily to lose the equally long-established *elephantopus* but are yet so attached to *gigantea* ?

2. The fact that a type specimen was collected in an area where it is not native is not *per se* an impediment to its use in nomenclature, as Frazier & Matyot imply, even if they do not say so outright. Indeed another well-known Indian Ocean tortoise *Astrochelys yniphora*, a Madagascar endemic, was originally described from a specimen traded into and collected on Grande Comore/Ngazidja (Bour, 2007). Another Indian Ocean example is that of the small bird *Lonchura striata* (Linnaeus, 1766), a native of India and south-east Asia, which was first collected in the island of Réunion to which it had been introduced (e.g. Cheke, 2009). Hence the collection locality of the type (e.g. Grande Comore, Réunion) need not reflect the true natural range of the species (e.g. Madagascar, India etc.). However as there are several recognised races of the bird, the Réunion specimen had at some later time to be assigned, by matching to other populations, to a source locality, Ceylon, (Baker, 1926) to create a nominate race (although Stuart Baker restricted the type locality to Ceylon/Sri Lanka, the range of the subspecies extends throughout southern India, and the birds introduced to Réunion probably originated in the French trading post at Pondicherry on the Tamil coast south of Madras/Chennai). The same issue applies to the lectotype of *Testudo dussumieri*. The Code specifies how to treat a specimen from outside its natural range, including an introduced self-sustaining or captive-breeding population: Article 76.1.1 states that 'If capture or collection occurred after

transport by artificial means, the type locality is the place from which the name-bearing type, or its wild progenitor, began its unnatural journey'. Thus, in full accordance with the Code, it is entirely in order for the type of an Aldabra tortoise to have the granitic Seychelles, Mauritius or Réunion as its collection locality, counter-intuitive as this may seem. Some early types inevitably have no unequivocal collection locality at all.

As I have argued previously (BZN 67:79–81), in a pertinent note Frazier & Matyot conspicuously failed to cite in their BZN review, it is highly probable that an Aldabra/Seychelles tortoise collected on either the granitic Seychelles or the Mascarenes in the mid-1820s would have come from Aldabra, and Frazier & Matyot are somewhat selective in their choice of sources to imply an equal likelihood of it being a native of the granitic Seychelles. Although native Seychelles animals were still being exported in 1807, as Frazier & Matyot (2010) note, by 1815, as I pointed out, Aldabran animals were being imported into the granitics in large numbers precisely because the native tortoises had become too scarce to be worth hunting (full references in my earlier note). It should be remembered that these animals were commercially transported to be sold and eaten, not as pets to be kept and nurtured for years, so earlier imports from the granitics would mostly have been consumed. At ca. 3 years old RMNH 3231, probably collected ca. 1825, would have hatched around 1822–3 at the earliest, and hence is unlikely to have originated in the granitics, although another, smaller, juvenile Dussumier collected (MNHN 1942), stated as being from the Seychelles by Duméril & Bibron, is considered somewhat tentatively to be a granitic native by Bour (2006 & refs. therein) and firmly assigned there with no additional identification evidence by Frazier & Matyot (2010); DNA extraction failed on this specimen (Austin et al., 2003). Frazier & Matyot also failed to acknowledge, as I also pointed out, that the locals on the recipient islands were then fully aware of the provenance of animals being imported (their origin advertised in sales), and Dussumier would certainly have been told where his specimen originated. Hence, whatever Temminck's occasional shortcomings on provenance, that is not an *a priori* reason to disbelieve his and Schlegel's designation in this specific case. As I have said previously (BZN 67: 79–81) 'why invent the then extremely obscure (to Europeans) locality of Aldabra if there was no reason to do so?' - the obvious inference is that at the time of transfer to Leiden the Paris museum had information directly from Dussumier that Aldabra was the (ultimate) origin of this specimen.

Frazier & Matyot (2010) profess to being amazed that I should suggest it, but the fact that RMNH 3231 cannot be assigned to one or other source on its mtDNA or (according to them) on morphology is of no importance at the level of species, as animals from both groups of islands are considered by almost everyone to be conspecific (e.g. Austin et al., 2003). Hence, since most authors are agreed that the specimen is of the species native to both Aldabra and the granitic Seychelles, it is perfectly proper to use it as the lectotype, despite its actual provenance being uncertain. Given that some authors split the species into Aldabra and granitic Seychelles forms (as subspecies) and a handful consider them species, it does become necessary either to restrict *dussumieri* to one or other group of islands as original source (irrespective of where it was collected), or invalidate it (which would take us back to *T. elephantina* for Aldabra animals). Recent study of juveniles of the three

existing morphotypes (Aldabra and two presumed to be from the granitic islands), reared in identical conditions (Gerlach & Bour, 2003; Gerlach, 2011), shows that they are statistically distinguishable, and most can be separated individually. RMNH 3231, a juvenile of straight carapace length 119 mm (Bour & Pritchard, unpublished; see photo with scale in Grünewald, 2009), is considered to be a juvenile Aldabra tortoise by the only three herpetologists who have personally studied the specimen, Bour, Pritchard & Hoogmoed (Hoogmoed et al., 2010; further supporting references in BZN 67: 79–81). Furthermore its body co-ordinates, using Gerlach's (2011) analysis, closely fit the Aldabra morphotype, not those presumed to be from the granitic islands. A figure showing RMNH's coordinates superimposed on Gerlach's (2011) figures for living tortoises is available from the author. Its co-ordinates are well within the 95% envelope for dorsal and lateral growth patterns, and only just outside for the plastral pattern, for which in any case the morphotypes are not clearly separable until reaching the 31–40 cm size range (Gerlach, 2011). Given the tradition that the specimen came from Aldabra, the long-standing morphological support for that view from those who have studied it, and with particular emphasis on the additional morpho-statistical evidence, I formally propose that the type locality of *Testudo dussumieri* Gray, 1831, represented by the lectotype in Leiden, RMNH 3231, be restricted to the Aldabra atoll. The specimen is fully illustrated with all labels by Grünewald (2009).

A further point is that the fact that the mtDNA haplotype exhibited by RMNH 3231 is not currently found on Aldabra proves nothing. The animal was collected long before the late 19th century bottleneck when the population was close to extinction (Stoddart & Peake, 1979; Bourn et al., 1999) which could have caused the loss of haplotypes (as already noted by Palkovacs et al., 2003). Furthermore it could easily have come from an island (Polymnie, Picard [later re-introduced]) where tortoises, and thus possibly some haplotypes, were wiped out entirely. Frazier & Matyot did not mention that Austin et al. (2003) found 3 other individuals with haplotypes 1–4 substitutions adrift from the majority, 2 alive in the Seychelles (and considered by the NPTS (Nature Protection Trust of Seychelles) to be granitic natives), and one labelled 'Aldabra' in the London Natural History Museum. Although the 'B' haplotype is unique, so are the 'C', 'D' and 'E' examples, thus reducing the significance of the small (2 substitutions) difference seen in RMNH 3231. Balmer et al. (2011), studying the genetic variation in tortoises on Aldabra, did not apply their microsatellite analysis to any museum specimens or to living animals thought to originate in the granitic islands, though previous work (Palkovacs et al., 2003) suggests variation is minimal.

In conclusion, Frazier & Matyot (BZN 68: 140–143) seem to have confused collection locality, type locality and geographical origin. Ideally these should be the same, but with old specimens, of species that were traded around, released and/or bred by humans, they often are not.

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