



Extinction of the Dodo *Raphus cucullatus* (Aves: Raphidae): dating reconsidered

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Abstract. The date when the Dodo, *Raphus cucullatus* (LINNAEUS, 1758), became extinct was generally supposed to fall in the 1660s or later in the 17th century. Evidence is presented, that the species became extinct much earlier, probably in the early 1630s.

■ *Aves, Raphus cucullatus, Mauritius, extinction*

The Dodo, *Raphus cucullatus* (LINNAEUS, 1758), was a large flightless pigeon endemic to the island of Mauritius, western Indian Ocean, where it was discovered for science in 1598 during the 2nd Dutch expedition to the East Indies (Strickland 1848, Hachisuka 1953, van Wissen 1995, Zisviller 1996, Fuller 2000, 2002a,b). Its last record was generally attributed to Volkert Evertszen, who reportedly encountered it on Mauritius in 1662 (see Olearius 1666). Recently, Roberts and Solow (2004) and Hume et al. (2004) suggested, that the Dodo became extinct much later, possibly between 1690–1700. Reconsideration of the available record, however, indicates that the dodo died out much earlier.

The reported observations of the dodo on Mauritius are limited to the following years (authors/observers are given in parentheses; reports marked with an asterisk include description and/or figure(s), which confirm the identity of the bird): 1598 (van Neck*), 1601 (Cornelisz*), 1602 (van West-Zanen*), 1606 (Matelief*), 1607 (van der Hagen*), 1611 (Verhuffen*), 1617 (van den Broecke*), 1628 (Herbert*), 1628 (Altham), pre-1631 (Anonymous*), 1638 (Cauche), 1662 (Evertszen), 1663–1674 (Simon in Hugo: 2 records), 1673 (Hugo), and 1685–1688 (Lamotius: 12 records). For details and citations see Strickland (1848), Hamel (1848), Hachisuka (1953), van Wissen (1995), Zisviller (1996), Fuller (2002b), Hume et al. (2004) and Mlíkovský (in press).

The following records require comments: (1) The anonymous report from 1631 was written in that year, but considers observations made somewhen prior to that date. There is no available record of the dodo from 1631 (contra Roberts et Solow 2004). (2) The book attributed to Cauche (1651) is of doubtful authorship and includes many dubious data (Atkinson 1920; see also Adams 1962). The dodos were described here as black birds larger than swans, having long, three-toed legs. This description probably applies to cassowaries (*Casuarius* sp.), which were sometimes confused with the dodos in the 17th century (see Strickland 1848). (3) Evertszen (see Olearius 1666) described the alleged dodos as swiftly running birds, which indicates that they were not the dodos of the earlier travelers. (4) Hubert Hugo (see Pitot 1905) and Isaac Loan Lamotius (see Hume et al. 2004) referred to certain birds as to 'dodaersen', which led Hume et al. (2004) to assume that their reports

considered dodos. However, Dutch word 'dodaers' was applied to a variety of birds with tailless appearance, such as dodos, cassowaries or little grebes (Strickland 1848, Oudemans 1917). There is no evidence, that Hugo or Lamotius applied the name to proper dodos.

After the removal of the alleged records discussed above, all reliable observations of dodos fall into the period 1598–1628. These data coincide with the origin of dodo pictures (excluding copies), the last of which probably originated in 1626 (Fuller 2002b). In addition, Grand Mogul Jahangir of Surat, India, obtained for his menagerie live dodos between 1624–1627, where they were seen by Peter Mundy sometime between 1628–1633 (see Stresemann 1958). Peter Mundy (ca. 1600–1667) was a learned traveler – acquainted with dodos – who contributed a significant negative record of dodos on Mauritius, because he found there no trace of them during his visit to the island in 1638.

In summary, dodos were repeatedly recorded on Mauritius between 1598–1628. There is a negative record from 1638. There is a gap of 34 years between the last confirmed observation of a dodo on Mauritius and the series of 'dodaersen' observations in 1662–1688. It is thus highly probable, that the Dodo died out between 1628 and 1638, i.e. only 30–40 years after 1598, when the bird was discovered for science and the island became frequently visited by travelers. This seems thus to be another example of a blitzkrieg against island birds, formerly shown to lead to the extinction of New Zealand moas (Holdaway et Jacomb 2000).

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