C.W. Moeliker
Natuurmuseum Rotterdam

The first case of homosexual necrophilia in the mallard *Anas platyrhynchos* (Aves: Anatidae)

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On 5 June 1995 an adult male mallard (*Anas platyrhynchos*) collided with the glass façade of the Natuurmuseum Rotterdam and died. An other drake mallard raped the corpse almost continuously for 75 minutes. Then the author disturbed the scene and secured the dead duck. Dissection showed that the rape-victim indeed was of the male sex. It is concluded that the mallards were engaged in an 'Attempted Rape Flight' that resulted in the first described case of homosexual necrophilia in the mallard.

Correspondence: C.W. Moeliker, Natuurmuseum Rotterdam, P.O. Box 23452, NL-3001 KL Rotterdam, the Netherlands; e-mail moeliker@nmr.nl

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The all glass façade of the extension of the Natuurmuseum Rotterdam, situated in an urban park, acts - under certain light conditions - as a true mirror (Fig. 1). Numerous birds, mostly trushes, pigeons and woodcocks, die in collision with the building. Especially during the first months after the new wing was erected in 1995, a 'bang' or a sharp 'tick' on the window meant work for the bird department.

THE CASE

Such was the case on 5 June 1995 at 17.55 h. An unusual loud bang, one floor below my office (Fig. 1), indicated yet another collision and an addition to the bird collection. I went downstairs immediately to see if the window was damaged, and saw a drake mallard (*Anas platyrhynchos* Linnaeus, 1758) lying motionless on its belly in the sand, two metres outside the façade. The unfortunate duck apparently had hit the building in full flight at a height of about three metres from the ground

(Fig. 1). Next to the obviously dead duck, another male mallard (in full adult plumage without any visible traces of moult) was present (Fig. 2a). He forcibly picked into the back, the base of the bill and mostly into the back of the head of the dead mallard for about two minutes, then mounted the corpse and started to copulate, with great force, almost continuously picking the side of the head (Fig. 2b). Rather startled, I watched this scene from close quarters behind the window (Fig. 1) until 19.10 h during which time (75 minutes!) I made some photographs and the mallard almost continuously copulated his dead congener. He dismounted only twice, stayed near the dead duck and picked the neck and the side of the head before mounting again. The first break (at 18.29 h) lasted three minutes and the second break (at 18.45 h) lasted less than a minute. At 19.12 h, I disturbed this cruel scene. The necrophilic mallard only reluctantly left his 'mate': when I had approached him to about five metres, he did



Figure 1 The new north wing of the Natuurmuseum Rotterdam. \mathbf{a} = the office of the author; \mathbf{b} = the approximate location where NMR 9997-00232 hit the glass façade; \mathbf{c} = the site from where the author observed the rape (from behind the glass). [photo: Christian Richters]

not fly away but simply walked off a few metres, weakly uttering series of two-note 'raeb-raeb' calls (the 'conversation-call' of Lorentz 1953). I secured the dead duck and left the museum at 19.25 h. The mallard was still present at the site, calling 'raeb-raeb' and apparently looking for his victim (who, by then, was in the freezer).

The secured specimen

Natuurmuseum Rotterdam, NMR 9997-00232, adult male (gonads seen and preserved), study skin (skull in situ), 05-VI-1995, The Netherlands, Rotterdam, Museumpark, leg. C.W. Moeliker; skin preserved by E.J.O. Kompanje, 25-VIII-1995. MEASUREMENTS (in mm): culmen to feathers 55.3, culmen to nostril 43.0, tarsus 42.0, midtoe with nail 71.0, midtoe without nail 62.0, wing 272.0 (right), 273.0 (left), tail 89.2.

BARE PARTS: bill dark olive-green, foot orange red. PLUMAGE AND MOULT: The bird is in adult plumage and had just started the post-breeding moult into the eclipse (non-breeding) plumage: two central pairs of tail feathers shed, with new growing; scapulars, feathers of chest, breast, belly, back and flanks in full moult; rest of plumage unmoulted and still in (worn) adult breeding condition (Fig. 3). See: Cramp & Simmons (1977). DESCRIPTION: (of plumage characteristics): crown and forehead dark green with a blackish wash, hindneck dark green with a bluish wash, chin at the base of the lower mandible cream white for about 1 cm and grading into dark green, earcoverts dark green mottled with light brown (black centred) feathers, ring around lower neck white (but not so dorsally), below the white ring the chest is chestnut ventrally, mixed with (newly moulted) blackish grey feathers edged buff, breast chestnut but mottled with more (blackish grey) buff-edged feathers,

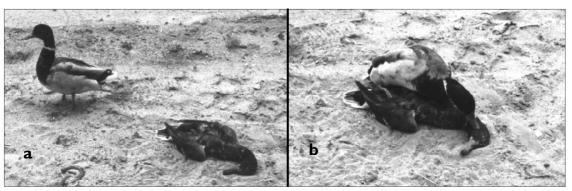


Figure 2 **a** D rake mallard (Anas platyrhynchos) in full breeding plumage (left) next to the dead drake mallard (NMR 9997-00232) just after collision with the new wing of the Natuurmuseum Rotterdam; **b** the same couple during copulation, two minutes after photo **a** was taken. [photo: C.W. Moeliker]

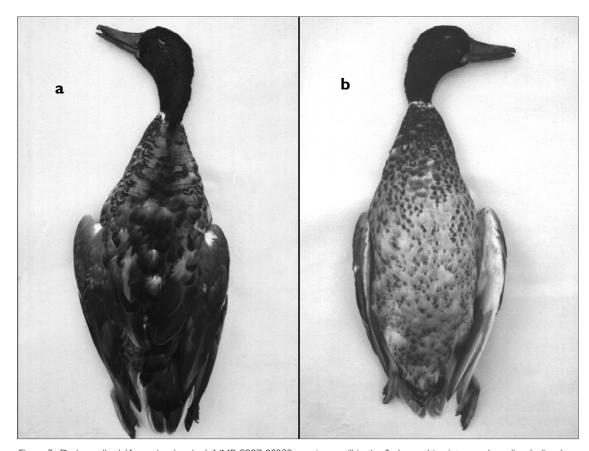


Figure 3 Drake mallard (*Anas platyrhynchos*), NMR 9997-00232, specimen still in the flesh, moulting into non-breeding (eclipse) plumage; **a** dorsal view, **b** ventral view. [photo: C.W. Moeliker]

feathers of lower breast and flanks grey with buff edges and centred light buff (newly moulted), belly white and finely vermiculated pale grey - spotted blackish grey due to newly moulted feathers, lower belly like breast, lateral undertail coverts black, central undertail coverts white with black spots, tail greyish white ventrally, hindneck (dorsally) vermiculated grey, back and rump blackish with a bluish wash, scapulars brown grey edged buff, primaries and tertials brown grey, secondaries brown grey tipped white (outer webs glossed blue), greater upperwing coverts grey (edged white and black), lesser upperwing coverts whitish grey, (unmoulted) tail feathers dorsally grey-brown edged and tipped white, newly moulted and still growing central tail feathers dorsally black edged buff. Gonads and Pathology: Dissection revealed that the specimen is indeed of the male sex: testes were yellow, fully developed, measured 28 x 15 mm each and were not in a reproductive state. Collision with the museum building had caused the following lethal internal damage: severe haemorrhages in the brain,

rupture of the right lung, trachea and liver, both scapula broken, most ribs broken close to the sternum (might be caused by the prolonged copulation); otherwise in good condition. Stomach empty.

The Museumpark mallards

The Museumpark in Rotterdam has several ornamental water-bodies, such as ponds and ditches, which house a more or less sedentary free-living mallard population of about 40-50 full-winged individuals. About 25% of the population consists of hybrids between the wild type and the white domesticated mallard. The majority shows no aberrant plumage characteristics and is apparently of wild origin. The mallards are rarely fed by humans and are not particularly tame, although certainly not shy. About 10-12 pairs breed, and the first ducklings are seen in early April (pers. obs.). The closest water-body, a 10 m

wide ditch that runs for about 750 m alongside the whole length of the Museumpark, is located just a few metres north of the new wing of the Natuurmuseum Rotterdam.

DISCUSSION

Although I did not actually see the events preceding the moment NMR 9997-00232 hit the building and died, I strongly believe the two mallards were involved in some kind of aerial chase or pursuit flight: the victim flew into the building in full flight and the drake that pursued, managed to prevent a collision and landed next to the dead duck. I watched the scene immediately (less than a minute) after the tremendous bang and saw the drake next to its dead congener (Fig. 2a). It is therefore highly unlikely that the drake was just passing by, saw the corpse and started to rape it. When we disregard the homosexual nature of this case, the pursuit-behaviour the mallards were involved in, is common (and also often observed in the Museumpark). After the breakup of the pairs (from mid March onwards), when the drakes congregate in small flocks, more than a dozen may chase a single female in the air, trying to force her down and rape her (Geyr von Schweppenburg 1953, 1955; Weidman 1956). Lebret (1961) calls this behaviour 'Attempted Rape Flight' (ARF) and Cramp & Simmons (1977) speak of 'rapeintent flights'. I could however only find reference to heterosexual ARF's (or any other pursuit-flights) in the mallard. Homosexual rape or attempted non-consensual copulation - as such - is known in the mallard (Bagemihl 1999, see below). The true homosexual nature of the case described here could be verified by inspection of the gonads: my initial thought that NMR 9997-00232 was a senile female wearing a male plumage (see: Post & Kompanje 1992) proved wrong. The plumage of NMR 9997-00232, although moulting into the non-breeding (eclipse) stage, still showed enough male features (Fig. 3) to judge a 'mistake' by the raping drake (that was still in full breeding plumage [Fig. 2a]) as highly unlikely.

Homosexual rape

Bagemihl (1999) in his well-researched and exhaustive overview of animal homosexuality, showed that in the mallard 'the proportion of male homosexual pairs varies between populations, anywhere from 2-19 percent of all pairs'. So, male homosexuality can be regarded as a common phenomenon among mallards. According to Bagemihl, drake pairs, however, do not exhibit overt sexual activity: they normally only show behaviour that preludes copulation but neither partner mounts the other. Interestingly, Bagemihl (1999) noted that 'some males in homosexual pairs have been observed attempting to rape or forcibly copulate with males outside their pairbond'. Initially, this may have been the case on 5 June 1995: the drake attempted to rape NMR 9997-00232 who fled, and the two got engaged in a true homosexual ARF.

Necrophilia

What still remains is the fact that NMR 9997-00232 was dead while he was being raped (one may argue that the copulation was no rape, but the act was non-consensual anyhow). Surely, this must have influenced the duration of the copulation. Necrophilia is known in the mallard, but only among heterosexual 'pairs': 'Occasionally, males even try to mate with dead females' (Bagemihl 1999). To the best of my knowledge, this case is the first described case of homosexual necrophilia in the mallard.

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DEINSEA - ANNUAL OF THE NATURAL HISTORY MUSEUM ROTTERDAM P.O.Box 23452, NL-3001 KL Rotterdam The Netherlands