

PRESUMED HYBRID COMMON *STERNA HIRUNDO* X SANDWICH TERN *S. SANDVICENSIS*

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In the morning of May 11th 2021, I was watching breeding common *Sterna hirundo* and arctic terns *S. paradisaea* at Nieuw Buitenheim, Texel, The Netherlands (53°07'12"N, 4°53'49"E). In the colony, I saw a tern which' appearance, while giving it a close inspection through my telescope, struck and puzzled me.

The lack of white on the forehead or a dark carpal bar suggested this bird was at least in its third calendar-year. It was slightly but noticeably bigger than common tern in direct comparison, with a long, black and evenly down-curved bill with a very small pale tip, a mantle colour being a trifle darker than, and head pattern similar to, sandwich tern *S. sandvicensis*, a short but prominent crest (figure 1), lack of extremely long outer tail-feathers, brown-red legs (figures 2-4) and a flight action similar to common tern. After a few minutes the bird disappeared, but later that day up to May 16th it irregularly returned to the same spot, where it was photographed. On May 16th it was also heard calling. The call was described as 'similar to one of the calls of common tern but slightly lower in pitch and harsher' (Ruud van Beusekom pers. comm.). On May 28th it was seen again, this time at Utopia, another colony of common terns, seven kilometres to the north. It was paired to a common tern and photographed and videoed while incubating (figure 5). On June 4th the birds were seen copulating. As the presumed hybrid was mounted by the common tern, it must have been a female. The nest contained eggs, which were incubated by both parents. After June 20th, the nest seemed to be deserted and chicks have not been seen, indicating that the breeding attempt was unsuccessful. The hybrid was last seen on July 14th.



figure 1. Presumed hybrid common x sandwich tern, Nieuw Buitenheim, Texel, The Netherlands, May 16th 2021. Note sandwich tern-like appearance. Photograph: Irma Thijssen
Vermoedelijke kruising visdief x grote stern. De vogel toont sterke gelijkenis met grote stern.

table 1. Characters of the presumed hybrid tern in comparison with three potential parent species.

Symbols indicate: – not matching the species, + matching the species and ± partly matching the species.

Kenmerken van de vermoedelijke hybride stern vergeleken met die van de drie potentiële oudersoorten. Betekenis van de symbolen: – komt niet overeen met deze soort, + komt overeen, ± komt deels overeen.

presumed hybrid at Texel	roseate tern <i>Sterna dougallii</i>	arctic tern <i>paradisaea</i>	common tern <i>hirundo</i>	sandwich tern <i>sandvicensis</i>
overall size slightly bigger than common tern	–	–	–	±
long decurved black bill with reddish extreme base and small pale yellowish tip	–	–	–	±
brown-red legs	±	±	±	–
short but prominent 'crest'	–	–	–	+
mantle colour between common and sandwich tern	–	±	±	±
mantle contrasting with white rump and tail	–	+	+	+
outer primaries lacking broad white edges to the inner webs	–	+	+	–
distinct dark markings on some secondaries	–	–	+	–
completely white tail	+	–	–	+
outer tail feather of moderate length and not reaching beyond wing tips	–	–	+	+
call like common but lower and harsher	–	–	±	±
flight action	–	–	+	±
number of shared characters	1-2	2-4	5-8	4-9



figure 2. Presumed hybrid common x sandwich tern, Nieuw Buitenheim, Texel, The Netherlands, May 16th 2021. Note the lack of broad white edges to the inner webs of the outer primaries and dark markings on the secondaries. Also visible are the white tail, pale underparts and brown-red legs. Photograph: Jeroen de Bruijn

Vermoedelijke kruising visdief x grote stern. Let op het ontbreken van brede witte randen aan de binnenvlaggen van de buitenste handpennen en de donkere tekening op de armpennen. Verder zijn witte staart, lichte onderdelen en bruinrode poten opvallend.



figure 3. Presumed hybrid common x sandwich tern (right) and common tern, Nieuw Buitenheim, Texel, The Netherlands, May 16th 2021. Note clearly paler upperparts and outer tail-feathers not reaching beyond wing-tips. Photograph: Jeroen de Bruijn

Vermoedelijke kruising visdief x grote stern. Bovendelen duidelijk lichter dan bij visdief en buitenste staartpennen niet voorbij handpennen reikend.



figure 4. Presumed hybrid common x sandwich tern, Nieuw Buitenheim, Texel, The Netherlands, May 16th 2021. Note pale-tipped bill, underwing pattern, and all white tail. Photograph: Jeroen de Bruijn

Vermoedelijke kruising visdief x grote stern op Texel. De snavel heeft een klein licht puntje, de handpennen hebben een korte maar brede donkere achterrand en de staart is geheel wit.

The combination of characters shown by the bird does not match any of the worlds' tern species (*cf.* Harrison *et al.* 2021), suggesting a hybrid origin. The most likely parental species are species that breed in The Netherlands or occur as near-annual vagrant (www.dutchavifauna.nl). A comparison of its appearance with the most likely parental species (table 1) shows that the structure, plumage and bare parts best match with both common tern and sandwich tern. Whereas a parentage of sandwich tern is strongly suggested by, *e.g.*, the elongated crest, the relatively large size and the pale-pointed black bill, determining the other parent species is less straightforward. However, common tern seems much more likely than roseate or arctic tern, given the larger number of characters of the former species shared with the presumed hybrid, and the lack of strong pointers in its plumage and structure towards either of the two latter species. In addition, the association of the hybrid with common terns (breeding in a common tern colony and mating with a common tern) in a region where roseate tern is a vagrant, with only 0-2 records per year in 2010-2020 (www.dutchavifauna.nl), makes common tern as one of the parental species more likely. Unfortunately, due to the locality of the nest, no material could be collected for DNA analysis, preventing to get more information about the hybrid's genetic background, including determination of the sex of the parents. Nevertheless, given its appearance, it seems justified to identify the bird as a presumed hybrid common x sandwich tern, a hitherto unknown hybrid (*cf.* McCarthy 2006, Ottenburghs *et al.* 2015).

Speculating on the origin of such a hybrid, long-time sandwich tern researcher Mardik Leopold proposed a theory that in a mixed colony, an egg of a sandwich tern could end up in a nest of a common tern breeding in close proximity. After hatching, the chick would be imprinted on common tern. Once adult, it would mate with the latter and, if successful, could produce a hybrid such as the one described here.



figure 5. Incubating presumed hybrid common x sandwich tern, Utopia, Texel, Netherlands, June 17th 2021. Photograph: Arend Wassink

Broedende vermoedelijke kruising visdief x grote stern in Utopia op Texel aan de rand van de visdieven- en kokmeewenkolonie. Ook hier zijn het lichte verenkleed en de donkere snavel met lichte punt duidelijk zichtbaar.

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SAMENVATTING – MOGELIJKE KRUISING VISDIEF X GROTE STERN

Op 11 mei 2021 vond ik een afwijkende stern in een gemengde kolonie visdieven en noordse sterns in Nieuw Buitenheim, Texel. De vogel, een vrouwtje, raakte later gepaard met een visdief in Utopia en heeft eieren gelegd, maar het broedsel is niet succesvol geweest. Zij had kenmerken van zowel visdief als grote stern, maar vanwege het witte uiterlijk en de zwarte snavel leek ze ook wel wat op een dougalls stern. De combinatie van kenmerken past echter het beste op een hybride visdief x grote stern. Een dergelijke hybride is nog nooit eerder vastgesteld.



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