

## NEW RECORDS OF THE GANNET *Morus bassanus* IN SLOVENIA

### Novi podatki o strmoglavcih *Morus bassanus* v Sloveniji

TILEN GENOV<sup>1,2,3</sup>, ALJAŽ MALEK<sup>3</sup>

<sup>1</sup> Institute for Biodiversity Studies, Science and Research Centre, University of Primorska, Garibaldijeva 1, SI–6000 Koper, Slovenia, e-mail: tilen.genov@gmail.com

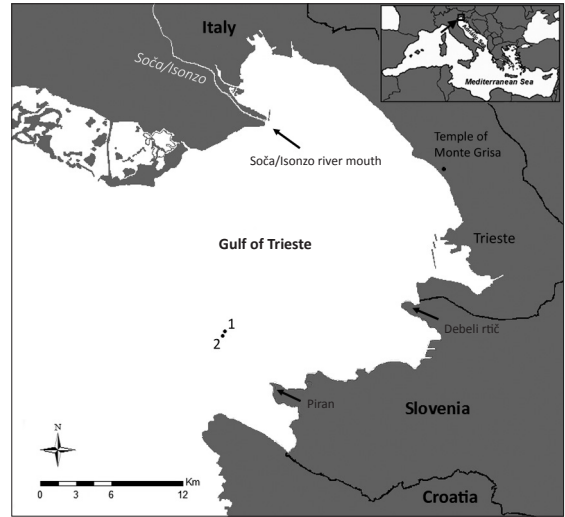
<sup>2</sup> Department of Biodiversity, Faculty of Mathematics, Natural Sciences and Information Technologies, University of Primorska, Glagoljaška 8, SI–6000 Koper, Slovenia

<sup>3</sup> Morigenos – Slovenian Marine Mammal Society, Kidričevo nabrežje 4, SI–6330 Piran, Slovenia

The Gannet *Morus bassanus* is widespread in the North Atlantic, with its main European breeding populations in the United Kingdom, Ireland, Faroe Islands, Norway and France (BARRETT 1988, HAMER *et al.* 2001, GRÉMILLET *et al.* 2006, WANLESS *et al.* 2008, FORT *et al.* 2012). After a decline due to excessive harvesting in the 19<sup>th</sup> century, the species underwent a recovery, resulting in a substantial population increase during much of the 20<sup>th</sup> century (WANLESS *et al.* 2005). Although the rate of population growth appears to have slowed down, the population is still believed to be increasing in numbers (WANLESS *et al.* 2005, BIRDLIFE INTERNATIONAL 2012).

The Gannet can also be found in the Mediterranean (PATERSON 1993), particularly in its western part during winter (PATERSON 1993, KUBETZKI *et al.* 2009, FORT *et al.* 2012). About 4% of the European population has been estimated to enter the Mediterranean during winter (PATERSON 1993). The literature on this species in the Mediterranean Sea is scarce, but it appears that its breeding is extremely rare in this basin. Summer records of adults and sub-adults, particularly in the eastern Mediterranean, including the northern Adriatic, have been attributed to misoriented birds (PATERSON 1993). The status of the Gannet in the Adriatic Sea, however, is not entirely clear.

Three Gannet records currently exist for Slovenia, two along the Slovenian coast of the Adriatic Sea (HANŽEL 2008, GAMSER *et al.* 2012) and one in central Slovenia, about 52 km inland (HANŽEL & ŠERE 2011). The first record for Slovenia was provided by HANŽEL (2008), who observed a single 2<sup>nd</sup> winter individual off the town of Piran (Figure 1), about 250 m from the shore. The author recognised

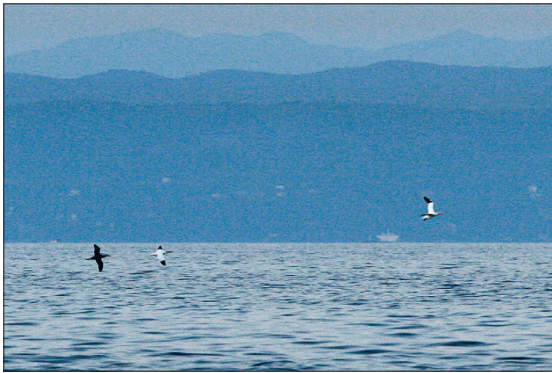


**Figure 1:** The Gulf of Trieste, with some of the locations cited in the text. The two dots (1, 2) depict the positions of the first and second Gannet *Morus bassanus* records reported in this paper, respectively.

**Slika 1:** Tržaški zaliv z lokacijami, omenjenimi v tekstu. Piki (1, 2) označujeta poziciji obeh novih opažanj strmoglavcev *Morus bassanus*.

the species through a telescope. The subsequent drawing and the description of the bird provided the confirmation required to allow its formal inclusion in the Slovenian list of bird fauna (HANŽEL 2008). The second observation of an immature individual was recorded near Vrhnika, central Slovenia (HANŽEL & ŠERE 2011), but the bird was not photographed (J. HANŽEL *pers. comm.*). The third and last record was provided by GAMSER *et al.* (2012), who observed and photographed a 2<sup>nd</sup> calendar year individual at Debeli rtič (Figure 1). None of these records, however, were accompanied by photographs that would allow unambiguous species identification. Nevertheless, the detailed descriptions, drawings and available photographic material or the consensus among observers were deemed sufficient for formal verification by the Slovenian Rarities Committee and inclusion in the Slovenian list of records. In this paper we provide two new records of the Gannet in Slovenia and briefly discuss its occurrence in the region.

In the late afternoon and evening of 9 Jun 2014, we were observing a group of Common Bottlenose Dolphins *Tursiops truncatus* from a research boat in the Slovenian part of the Gulf of Trieste (northern Adriatic Sea), as part of a long-term study of Bottlenose Dolphin ecology and conservation (GENOV *et al.* 2008). The sea was calm (sea state 1, Beaufort scale) and the



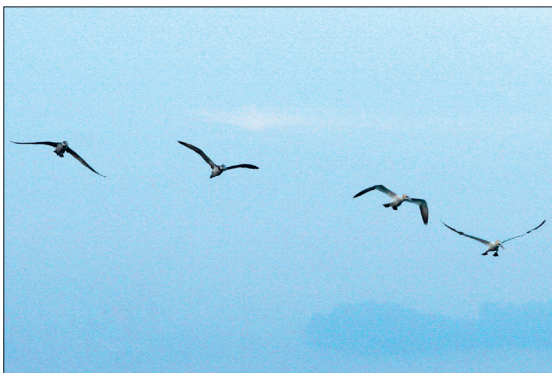
**Figure 2:** Initial view of Gannets *Morus bassanus* in the Slovenian part of the Gulf of Trieste, with the Italian coast and Slovenian hills in the background. (photo: T. Genov)

**Slika 2:** Prvi pogled na strmoglavce *Morus bassanus* v slovenskem delu Tržaškega zaliva, z italijansko obalo in slovenskimi hribov v ozadju. (foto: T. Genov)



**Figure 3:** Four Gannets *Morus bassanus*. The 'Formaggino', a prominent landmark, can be seen in the background, allowing visual assessment of the approximate sighting location. (photo: T. Genov)

**Slika 3:** Štirje strmoglavci *Morus bassanus*. V ozadju je viden 'Formaggino', izrazita orientacijska točka, ki omogoča oceno približne lokacije opažanja. (foto: T. Genov)



**Figure 4:** Two immature (left) and two adult (right) Gannets *Morus bassanus* passing the research boat. (photo: T. Genov)

**Slika 4:** Dva mlada (levo) in dva odrasla (desno) strmoglavca *Morus bassanus* v letu mimo raziskovalnega plovila. (foto: T. Genov)

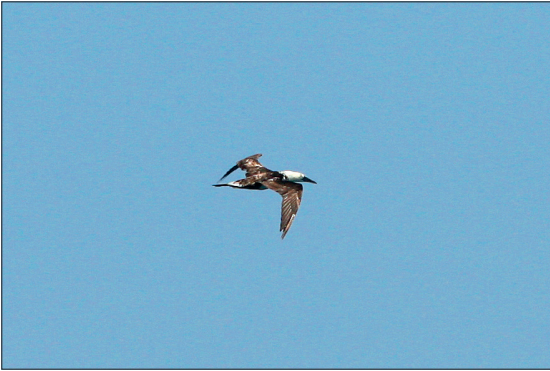


**Figure 5:** An adult Gannet *Morus bassanus*. (photo: T. Genov)

**Slika 5:** Odrasel strmoglavec (*Morus bassanus*). (foto: T. Genov)

skies predominantly clear. At 20.31 hrs, we noticed a flock of birds near the waterline, about 400 m from the boat, and identified them as Gannets. We took 55 digital photographs using a Canon EOS 30D DSLR camera with Canon L USM 70-200 f2.8 lens (Figures 2–5). The flock consisted of four birds, two 2<sup>nd</sup> calendar year individuals and two adults (Figures 3 & 4). It was not possible to determine their sex due to lack of any sexual dimorphism in this species (REDMAN *et al.* 2002). The birds passed about 5 m above the research boat and were out of sight at 20.33 hrs. The position of the research boat at the time when the birds were closest to it was 45°34.161' N; 13°31.124' E

(Dot 1, Figure 1), as determined by the Global Positioning System (GPS). The approximate location of the sighting, 5.7 km from the nearest shore (Piran), is also evident from Figure 3, where a prominent church near Trieste, called the Temple of Monte Grisa (Tempio Mariano di Monte Grisa, also known locally as "Formaggino") can be seen in the background. We did not observe any direct evidence of foraging. However, a number of indications suggested that fish were abundant in the area. Immediately before and after the Gannet sighting, as well as in the days prior to and after it, dolphins were regularly observed surface feeding. Moreover, we observed several schools of fish



**Figure 6:** An immature Gannet *Morus bassanus* observed on the second occasion. (photo: T. Genov)

**Slika 6:** Mlad strmoglavec (*Morus bassanus*) v času drugega opažanja. (foto: T. Genov)

at the surface. It is thus possible that the Gannets were indeed feeding in the area.

The second sighting took place on 4 Aug 2014, at 12.24 hrs, again during a focal follow of a dolphin group. As in the previous case, the sea was calm (sea state 1, Beaufort scale) and the skies predominantly clear. The position was 45°33.936' N; 13°30.943' E, 5.5 km from the nearest shore (Piran) and only 480 m from the previous sighting (Dot 2, Figure 1). This case involved a single immature individual, apparently in its 2<sup>nd</sup> calendar year (Figure 6). The bird passed above our research boat at about 10 m altitude and was out of sight at 12.26 hrs. We took 16 digital photographs using the same equipment as above.

Our sightings, particularly the first one, have a multi-faceted significance for Slovenia: (1) they are the 4<sup>th</sup> and 5<sup>th</sup> records for this species in Slovenia; (2) they are the first records to be photographically documented with high quality photographs, allowing not only species identification but also (in the first case) determination of the sighting's approximate location; (3) the first sighting is the first record involving multiple individuals and (4) it is the first record involving both immature and adult birds. Both records have been verified by the Slovenian Rarities Committee of DOPPS-BirdLife Slovenia.

It appears that all Gannet records in Slovenia to date have been of immature individuals (HANŽEL 2008, HANŽEL & ŠERE 2011, GAMSER *et al.* 2012). Our first record, however, involved two adults (Figures 4 & 5), the first such case for Slovenia. Previous Slovenian records along the coast were partially attributed to stormy or windy weather, particularly southeast winds, either during the observations of Gannets, or in the

preceding days (HANŽEL 2008, GAMSER *et al.* 2012). These winds were believed to bring the birds closer inshore. This is in contrast with our observations, which took place during prolonged periods of stable weather with little wind.

The Gannet appears to be relatively rare in the eastern Mediterranean, although occasional records do exist in the basin, including Sicily, Malta, Libya, Tunisia, Greece, Cyprus, Turkey, Israel and Egypt (THOMSON 1975, VERON 1988, PATERSON 1993, COOPER *et al.* 2003, VERON & LAWLOR 2009). Sightings have also been recorded along the Bulgarian Black Sea coast (BOEV 2009). In the Adriatic Sea, it does not appear to be a frequently occurring species. Only three records exist for Croatia and only one of those since 1950 (KRALJ & BARIŠIĆ 2013, J. KRALJ *pers. comm.*), although the latter record involved three separate sightings of presumably the same bird (LUKAČ *et al.* 1993). Nevertheless, the species appears to be an occasional visitor to the northern shores of the Gulf of Trieste, particularly around the mouth of the Soča / Isonzo river (PERCO *et al.* 2006, F. PERCO *pers. comm.*, D. STANIČ *pers. comm.*), and in the north-western Adriatic (PATERSON 1993, www.ornitho.it). Occasional records also exist along the coasts of Montenegro and Albania (SACKL *et al.* 2014).

The Gannet is currently considered a rare species in Slovenian waters (HANŽEL & ŠERE 2011). This is likely to be a generally accurate designation, as we had never encountered this highly distinctive and conspicuous bird during 12 years of our extensive surveys at sea, either in the Gulf of Trieste or in adjacent waters of the northern Adriatic Sea. In addition, monthly boat-based surveys in Slovenian waters between June 2012 and August 2013, focusing on Mediterranean Shag *Phalacrocorax aristotelis desmarestii*, yielded no sightings of Gannets (U. KOCE *pers. comm.*). The species is currently believed to be increasing in numbers (WANLESS *et al.* 2005, BIRDLIFE INTERNATIONAL 2012), so it is possible that these new sightings are a result of the expansion in species range. On the other hand, the increase in sightings might simply be a result of the increase in observer coverage and survey effort. Finally, immature animals are less conspicuous and possibly easier to overlook than adults. It is thus possible that the species is more common than previously thought, possibly represented predominantly by immature age classes. This would explain why all previous records were of immature animals. Future surveys may help determine the status of the Gannet in the Gulf of Trieste and the northern Adriatic, and possibly help document any changes in the frequency of occurrence.

**Acknowledgements:** We are grateful to Jurij Hanžel, Urša Koce, Jelena Kralj, Fabio Perco, Domen Stanič and Tjaša Zagoršek for information on the previous Gannet records in Slovenia and the northern Adriatic Sea. Jurij Hanžel also kindly helped with age class determination of immature individuals. Peter Glasnović, Urša Koce, Jurij Hanžel and one anonymous reviewer provided useful comments on the early manuscript. Special thanks to Ana Hace for kindly helping with the map preparation.

## Povzetek

Strmoglavac *Morus bassanus* je razširjen v Severnem Atlantiku in Severnem morju, predvsem pozimi pa del populacije vstopa tudi v zahodno Sredozemlje. V vzhodnem Sredozemlju je občutno redkejši, njegov status v Jadranskem morju pa ni povsem razjasnjen. V Sloveniji so bila doslej zabeležena tri opažanja. V pričujočem delu podajava dve novi opažanja strmoglavca v Sloveniji in kratek pregled pojavljanja na območju Jadrana. Prvič sva vrsto zabeležila 9. 6. 2014, 5,7 km od Pirana (45°34.161' N; 13°31.124' E). Šlo je za dve odrasli ptici in dva nezrela osebka v drugem koledarskem letu. Drugič, in sicer 4. 8. 2014, 5,5 km od Pirana (45°33.936' N; 13°30.943' E) in le 480 m od predhodne lokacije, pa sva zabeležila en osebek v drugem koledarskem letu. V obeh opažanjih je bilo skupaj posnetih 71 fotografij. Oba podatka je potrdila Komisija za redkosti. Ti novi podatki imajo za Slovenijo velik pomen, saj gre za 1) 4. in 5. opažanje te vrste pri nas; 2) prvi opažanja, dokumentirani s kvalitetnimi fotografijami in 3) prvo opažanje več osebkov ter odraslih ptic. Pojavljanje strmoglavcev na Jadranu je razmeroma redko, bolj pogosti so v severozahodnem delu regije. Globalna populacija je v zadnjem stoletju naraščala, zato utegnejo biti nova opažanja rezultat širitve areala, čeprav so lahko tudi posledica večjega opazovalnega napora v zadnjih letih. Ker so nezreli osebki manj prepoznavni kot odrasli, je možno, da so na tem območju pogostejši, kot smo mislili doslej. Prihodnje raziskave utegnejo dati odgovore na vprašanja statusa strmoglavcev v Tržaškem zalivu in severnem Jadranu ter morebitnih sprememb v pogostosti pojavljanja.

## References

BARRETT R. (1988): The dispersal and migration of the Gannet *Sula bassana* from Norwegian breeding colonies. – Ringing & Migration 9: 139–145.  
BIRDLIFE INTERNATIONAL (2012): *Morus bassanus*. The IUCN Red List of Threatened Species. Version 2014.2. – [www.iucnredlist.org], 04/09/2014.

BOEV Z. (2009): Status of the gannet *Morus bassanus* in the Black Sea region (E Bulgaria). – *Acrocephalus* 30 (140): 31–34.  
COOPER J., BACCETTI N., BELDA E. J., BORG J. J., ORO D., PAPACONSTANTINOU C., SÁNCHEZ A. (2003): Seabird mortality from longline fishing in the Mediterranean Sea and Macaronesian waters: a review and a way forward. – *Scientia Marina* 67(Suppl 2): 57–64.  
FORT J., PETTEX E., TREMBLAY Y., LORENTSEN S.-H., GARTHE S., VOTIER S., PONS J. B., STORAT F., FURNESS R. W., GRECIAN W. J., BEARHOP S., MONTEVECCHI W. A., GRÉMILLET D. (2012): Meta-population evidence of oriented chain migration in northern gannets (*Morus bassanus*). – *Frontiers in Ecology and the Environment* 10: 237–242.  
GAMSER M., BORDJAN D., DENAC M., NOVAK J., KOZINA A. (2012): Strmoglavac *Morus bassanus*. – *Acrocephalus* 33 (152/153): 123–124.  
GENOV T., KOTNJEK P., LESJAK J., HACE A., FORTUNA C. M. (2008): Bottlenose dolphins (*Tursiops truncatus*) in Slovenian and adjacent waters (northern Adriatic Sea). – *Annales, Series Historia Naturalis* 18 (2): 227–244.  
GRÉMILLET D., PICHEGRU L., STORAT F., GEORGES J.-Y. (2006): Conservation implications of the apparent mismatch between population dynamics and foraging effort in French northern gannets from the English Channel. – *Marine Ecology Progress Series* 319: 15–25.  
HAMER K., PHILLIPS R., HILL J., WANLESS S., WOOD A. (2001): Contrasting foraging strategies of gannets *Morus bassanus* at two North Atlantic colonies: foraging trip duration and foraging area fidelity. – *Marine Ecology Progress Series* 224: 283–290.  
HANŽEL J. (2008): Strmoglavac *Morus bassanus* - nova vrsta v avifauni Slovenije. – *Acrocephalus* 29(138/139): 181–183.  
HANŽEL J., ŠERE D. (2011): Seznam ugotovljenih ptic Slovenije s pregledom redkih vrst. – *Acrocephalus* 32 (150/151): 143–203.  
KRALJ J., BARIŠIĆ S. (2013): Rare birds in Croatia: Third report of the Croatian Rarities Committee. – *Natura Croatica* 22(2): 375–396.  
KUBETZKI U., GARTHE S., FIFIELD D., MENDEL B., FURNESS R. W. (2009): Individual migratory schedules and wintering areas of northern gannets. – *Marine Ecology Progress Series* 391: 257–265.  
LUKAČ G., KUČINIĆ M., VUKOVIĆ V. (1993): Treći nalaz bijele blune (*Morus bassanus*) u Hrvatskoj. – *Troglodytes* 6: 51–53.  
PATERSON A. M. (1993): The status of the northern gannet (*Sula bassana*) in the Mediterranean. pp. 161–171 In: AGUILAR J. S., MONBAILLIU X., PATERSON A. M. (eds.): Status and Conservation of Seabirds - Proceedings of the 2<sup>nd</sup> Mediterranean Seabirds Symposium. SEO/BirdLife & Medmaravis, Madrid.  
PERCO F., MERLUZZI P., KRAVOS K. (2006): The mouth of the river Isonzo and Cona Island. – *Edizioni della laguna, Mariano del Friuli*.  
REDMAN K., LEWIS S., GRIFFITHS R., WANLESS S., HAMER K. (2002): Sexing northern gannets from DNA, morphology and behavior. – *Waterbirds* 25 (2): 230–234.  
SACKL P., SCHNEIDER-JACOBY M., STUMBERGER B. (2014): Planbeobachtungen des sichtbaren Vogelzuges vor dem

- Bojana-Buna-Delta (Montenegro/Albanien) an der südöstlichen Adria im März 2010. – Der Ornithologische Beobachter 111 (2): 187–232.
- THOMSON A. L. (1975): Dispersal of first-year gannets from the Bass Rock. – Scottish Birds 8 (5/6): 295–298.
- VERON P., LAWLOR M. (2009): The dispersal and migration of the Northern Gannet *Morus bassanus* from Channel Islands breeding colonies. – Seabird 22: 37–47.
- VERON P. K. (1988): Movements of gannets ringed on Les Etacs and Ortac, Alderney, Channel Islands. – Ringing & Migration 9: 37–43.
- WANLESS S., HARRIS M. P., LEWIS S., FREDERIKSEN M., MURRAY S. (2008): Later breeding in northern gannets in the eastern Atlantic. – Marine Ecology Progress Series 370: 263–269.
- WANLESS S., MURRAY S., HARRIS M. P. (2005): The status of northern gannet in Britain & Ireland in 2003/04. – British Birds 98: 280–294.

Prispelo / Arrived: 29. 9. 2014

Sprejeto / Accepted: 1. 11. 2014