

SIGHTING OF A MOTHER-CALF PAIR OF SOUTHERN RIGHT WHALE *Eubalaena australis* IN PERUVIAN WATERSOBSERVACIONES DE UNA PAREJA MADRE-CRÍA DE LA BALLENA FRANCA *Eubalaena australis* EN AGUAS PERUANAS

Koen Van Waerebeek*, Julio C. Reyes** y Marie-Françoise Van Bressem***

On 25 November 1987 two southern right whales *Eubalaena australis* (DESMOULINS, 1822) were photographed nearshore off Ilo (17° 38'S, 71° 20'W) in southern Peru (VAN WAEREBEEK *et al.*, 1992). These whales, some 10-15 m long, stayed in the vicinity of Ilo for three days before heading south and constituted the, to date, only positive record of *E. australis* in Peruvian waters. Here we document a second sighting, the first known mother-calf pair for Peru, as well as the northernmost authenticated record in the eastern Pacific Ocean.

When first observed by the authors on 7 September 1996, a female southern right whale with calf were swimming close inshore (GPS position: 16° 13'08"S, 73° 42'06"W) about 0.5 km north of the small "La Punta" harbour of Atico, Arequipa, Peru. We observed their behaviour by naked eye and 7x50 binoculars from shore intermittently from about 7am-5 pm. Most of the time the pair was either loafing at the surface or slowly moving counterclockwise in large circles some 40 -150 m from the rocky shore. The whales repeatedly entered very shallow water just beyond the surf. The adult, an estimated 12-15 m in length (roughly twice the size of near-by artisanal fishing boats) never submerged for longer than a minute. The calf consistently blew 1-3 seconds after its mother. The latter periodically turned on her side (most often the left) exposing one flipper and a fluke. When this coincided with the calf being at right angles with the rear half of the cow, we interpreted this as suckling.

The calf, estimated at somewhat less than half the length of the adult, permanently remained within a few meters from its mother and indulged in playful behaviour most of the time, such as raising flippers, flukes and head above the water surface while touching or bumping against the cow. Repeatedly the cow responded by lifting her calf partly out of the

water, immobilizing it belly-up across her back or tailstock. At one instance she audibly slapped the water surface with her right flipper 17 times in succession for no obvious reason. When a fishing boat approached to less than 50 m, the adult adopted a spy-hopping posture, then the animals swiftly distanced themselves from the offending craft. Several South American sea lions *Otaria byronia* were seen swimming agitatedly around the whales for at least 30 minutes, apparently examining the whales which remained totally oblivious to their presence. No seabirds were associated at any moment.

Inhabitants of the fisheries port of Atico reported daily seeing the whales close inshore since one month, between the site where we first spotted them and a few km further north off the Chorrillos settlement (16° 15'N, 73° 42'W). The majority of right whale mother-calf pairs in Chile, Argentina and Brazil have also been sighted in nearshore waters with depths ranging 5-30 m (PAYNE, 1986; AGUAYO *et al.*, 1992; LODI *et al.*, 1996). Chorrillos residents Mr. & Mrs. Flores stated (pers. comm. to KVW) that 3-4 weeks earlier, i.e. early to mid-August, an adult whale appeared alone in the cliff-rimmed baylet and gave birth. Noting blood, the Flores initially thought the whale was injured and had approached shore to seek shelter, until the neonate emerged. The Peruvian weekly *Somos* (no.512) published four photographs and cited independent witnesses that "the sea tainted red with blood moments before the calf appeared". The timing agreed and the independent claims suggest there should be little doubt about an inshore parturition.

During a second visit to Atico on 4 October 1996, we found the mother-calf pair merely some 200-400 m south (at 16° 13'19"S, 73° 41'58"W) of the first encounter site. Locals who had adopted the habit of following the whales' every move declared the ani

*Peruvian Centre for Cetacean Research (CEPEC), Jorge Chávez 302, Lima 20, Pucusana, Perú.

**Áreas Costeras y Recursos Marinos, Av. San Martín 1471, Pisco, Perú.

***Peruvian Centre for Cetacean Research.

mals had not moved beyond this confined area. We observed the whales both from shore and from a small fishing boat. The calf, staying close to its mother (Fig. 1 a), had notably grown and turned more active. It attempted to breach on several occasions (Fig. 1 b). The behaviour of the whales was still synchronized, but they submerged for longer periods while the circle-swimming pattern had become less obvious.

The adult female's callosity pattern was discontinuous from the bonnet to the coaming (Fig. 1 c), the type described from right whales in Argentina and South Africa (PAYNE *et al.*, 1983; BANNISTER, 1990; BEST and UNDERHILL, 1990). Wary to disturb the animals we were unable to make detailed ID photographs of callosity patterns. Nevertheless we are certain we observed the same mother-calf pair at all times since the adult female was recognizable by a small, neatly rounded nick located subapically on the trailing edge of the left fluke. Otherwise the flukes were unmarked. No grey or white dorsal blazes were visible but both the adult and the calf showed a pure white ventral blaze in the umbilical area. A still and video photographic record is deposited in the Peruvian Centre for Cetacean Research, Pucusana, Peru.

The right whales reportedly left Atico after a 6.4 Richter earthquake of 1'58" duration, with a nears



Figure 1 a. Mother-calf pair of southern right whales observed inshore near Atico, southern Peru, on 4 October 1996. Calf positioning at right angles of adult female, in anticipation to suckle.



Figure 1 b. Calf attempting to breach just behind the surf. Rocky shore in the foreground.

shore epicentre some 100 km NW of Atico, struck the region on 12 November 1996. There is no proof of a cause-effect relationship but the quake was highly destructive in Nazca, 135 km from the epicentre, and may have generated very high amplitude, low-frequency underwater sounds. A mother-calf pair of right whales, possibly the same individuals, were last seen in Peruvian waters by biologist Delia Vega off La Planchada (16°26'S, 73°08'W) in mid-December 1996.

Significantly, only 16 mother-calf pairs have been recorded from northern and south-central Chile in 28 years (1964-1991) and none from Peru. The northernmost known breeding in the SE Pacific is from Bahía San Jorge, Antofagasta, at 23° 39'S (CLARKE, 1965; CÁRDENAS *et al.* 1987; AGUAYO and TORRES, 1990; AGUAYO *et al.* 1992; BRITO, 1992; VAN WAEREBEEK *et al.*, 1992). The present observations occurred some 300 km in NWW direction of the 1987 Ilo case (VAN WAEREBEEK *et al.*, 1992), and stand as the most boreal confirmed sighting of *E. australis* in the eastern Pacific Ocean. This compares well with the northernmost record on the Atlantic coast of South America, i.e. 33 km east of Nova Vigosa, Banco dos Abrolho, Brazil, at 17° 53'S, 39° 22'W (ENRICH, 1991; LODI *et al.*, 1996), which is only slightly further south.

Fishermen and other Atico locals concurred that they never witnessed a similar event before, and in year-round shipboard surveys since 1995 no right whales have been sighted (ARIAS-SCHREIBER and ALFARO, 1996). Calving right whales seem particularly rare in Peru, however in the 19th century the situation may have been different. MAURY's (1851) "Whale Chart" indicated whaling grounds for southern right whales in two contiguous 5° square grids off central and northern Peru with area boundaries 05-15° S and 80-85° W. If correct, feeding or breeding grounds, or both, may have existed off Peru before the species was hunted to near-extinction. A slowly recovering SE Pacific stock may now be reclaiming this area (see CÁRDENAS *et al.*,



Figure 1 c. Adult female southern right whale with discontinuous callosity pattern. Note whale-watching public on the shore.

1987; AGUAYO *et al.*, 1992; VAN WAEREBEEK *et al.*, 1992). Not only the northern location is surprising but also the fact that, except for the Sechura Peninsula, these grounds covered mostly pelagic habitat. BANNISTER *et al.* (1996) presented direct evidence for a link between onshore breeding grounds and offshore probable feeding grounds for right whales off southern Australia.

The whales elicited, for Peru, hitherto unseen public interest (Fig. 1 c) and extensive media coverage. Many hundreds, if not thousands, of tourists either visited Atico specifically to watch these animals or interrupted their journey along the Panamericana highway, bringing an economic mini-boom. No right whales were sighted in 1997 but if they reappear in subsequent years and remain undisturbed, shore-based whalewatching may develop into a seasonal and sustainable economic activity for the isolated coastal communities in southern Peru.

ACKNOWLEDGEMENTS

Peter B. Best, Philip Clapham and Anelio Aguayo are thanked for useful comments on an earlier draft of this paper. CEPEC acknowledges support from the Gesellschaft zum Schutz der Meeressäuger and Marine Education and Research. Reyes was supported by WDCS. We thank M. Arias-Schreiber for access to a boat and E. Vega of America Television for a video copy.

LITERATURE CITED

- AGUAYO A & D TORRES. 1990. Records of the southern right whale, *Eubalaena australis* (Desmoulins, 1822) from Chile between 1976 and 1982. **Reports of the International Whaling Commission**. (Special Issue 12):159-160.
- AGUAYO A, JC CARDENAS & D TORRES. 1992. Análisis de los avistamientos de *Eubalaena australis* (Desmoulins, 1822) en aguas chilenas, desde 1983 hasta 1989. **Serie Científica Instituto Antártico Chileno**. 42: 77-91.
- ARIAS-SCHREIBER M & JO ALFARO. 1996. Preliminary data on cetacean sightings off Peru from an oceanographic research vessel in 1995-96. Paper SC/48/O, Scientific Committee, International Whaling Commission, Aberdeen.
- BANNISTER JL. 1990. Southern right whales off western Australia. **Reports of the International Whaling Commission** (Special Issue 12): 279-288.
- BANNISTER J, S BURNELL, C BURTON & H KATO. 1996. Right whales off southern Australia: direct evidence for a link between onshore breeding grounds and offshore feeding grounds. Document SC/48/SH28 presented to the IWC Scientific Committee, Aberdeen. 5pp.
- BEST PB. 1990. Trends in the inshore right whale population off South Africa, 1969-1987. **Marine Mammal Science** 6: 93-108.
- BEST PB & LG UNDERHILL. 1990. Estimating population size in southern right whales (*Eubalaena australis*) using naturally marked animals. **Reports of the International Whaling Commission**. (Special Issue 12): 183-189.
- BRITO JL. 1992. Evidencias de una probable zona de reproducción de ballena franca en Cartagena, centro de Chile. Abstract, 5ta Reunión de Especialistas en Mamíferos Acuáticos de América del Sur, Buenos Aires, 28 September-2 October 1992. 13.
- CÁRDENAS JC, D TORRES, J OPORTO & M STUTZIN. 1987. Presencia de ballena franca (*Eubalaena australis*) en las costas de Chile. Anais da 2a reunião de trabalho de especialistas em mamíferos aquáticos da América do Sul, Rio de Janeiro, 4-8 agosto 1986: 28-31.
- CLARKE R. 1965. Southern right whales on the coast of Chile. **Norsk Hvalfangst-Tidende** 54(6): 121-128.
- LODI L, S SICILIANO, & C BELLINI. 1996. Ocorrencias e conservacao de baleias-francas-du-sul, *Eubalaena australis*, no litoral do Brasil. **Papeis Avulsos de Zoologia**, S.Paulo 39(17): 307-328.
- MAURY MF. 1851. **Whale Chart**. National Observatory, Bureau of Ordnance and Hydrography, USA.
- PAYNE R, O BRAZIER, EM DORSEY, JS PERKINS, VJ ROWNTREE & A TITUS. 1983. External features in southern right whales (*Eubalaena australis*) and their use in identifying individuals. pp. 371-445. In: Payne, R. (ed.) **Communication and Behavior of Whales**. AAAS Selected Symposium Series 76. Westview Press, Boulder, Colorado.
- PAYNE R. 1986. Long term behavioral studies of the southern right whale (*Eubalaena australis*). pp.161-167. In: RL Brownell, PB Best and JH Prescott (eds.). Right whales: Past and Present Status. **Reports of the International Whaling Commission**. (Special Issue 10). Cambridge, England.
- VAN WAEREBEEK K, JC REYES & C ARANDA. 1992. Southern right whales (*Eubalaena australis*) off southern Peru. **Marine Mammal Science** 8(1): 86-88.