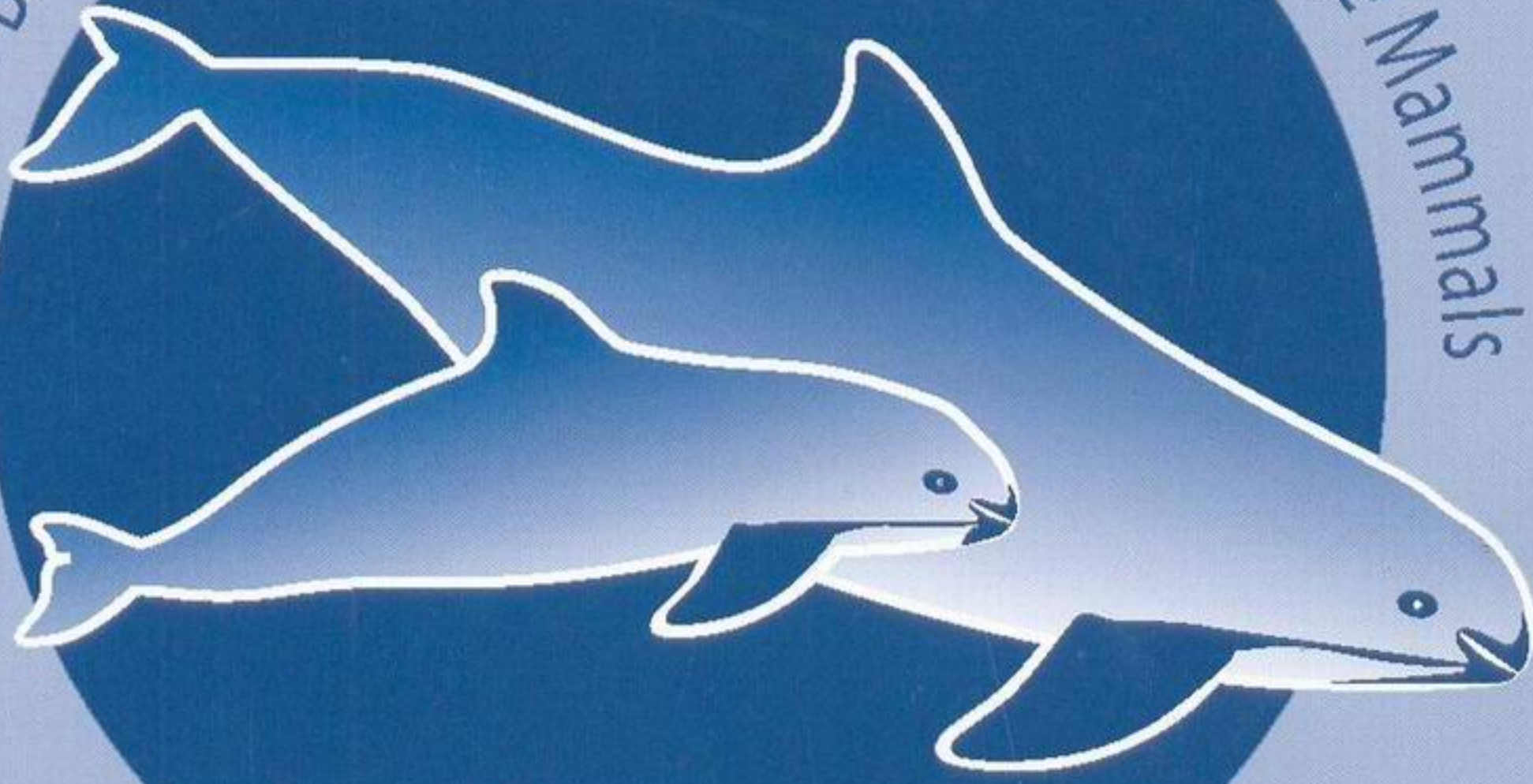


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# ABSTRACTS



**Right Whales (*Eubalaena australis*) off Southern Brazil:  
Annual and Seasonal Patterns of Occurrence, Site  
Fidelity and Group Structure**

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Southern right whales (*Eubalaena australis*) in Brazil were historically distributed from northeastern to southern coast, but intensive commercial whaling held until 1973 almost extirpated whales from the region. From 1986 through 2003 we conducted aerial surveys off southern Brazil primarily for photo-identification of the remnant population. A standard 120Km coastline between Santa Catarina Island (27°25'S, 48°30'W) and Laguna (28°36'S, 48°48'W) was always surveyed. 481 whales (223 groups) were sighted in 16 surveys during peak whale abundance. Groups consisted mostly of two whales (67.3%, n=150); groups of up to 8 whales were sighted. 149 sightings were mother/calf pairs; 183 were unaccompanied whales. Whales concentrated between Garopaba and Araranguá (peak in Laguna). Distribution of mother/calf pairs and unaccompanied whales differed, though not supported statistically (Mann-Whitney  $U=71.5$ ,  $z=0.301$ ,  $p=0.763$ ,  $n_1=11$ ,  $n_2=14$ ). Because unequal survey coverage and irregularity throughout the period, we compared cumulative density of whales/bin (12 minutes latitude long) between blocks of years with similar survey coverage and approximate date of flight to verify tendencies on distribution. Within-season distribution was described after monthly surveys conducted between July- November 2002 and 2003. Whales arrived in July/August, reaching peak in September, declining in October/November. 39 non-calf whales provided information on intra-annual resighting patterns. 31 whales were resighted inter-annually at least once (sighting interval: 1-10 years). 71% occurred in 2003 (none before 1994). 93.5% (n=29) were resighted once. From 120 females identified in Brazil, 19.2% (n=23) have shown some level of site fidelity. 82.6% (n=19) were in calving years. 3.4% (n=8) of the 149 unaccompanied whales have been resighted (one-year modal interval). Distribution was not uniform, indicating specific areas as important wintering habitat for this recovering species. Survey effort varied, but patterns of distribution are identified. Distribution of mother/calf pairs and unaccompanied whales is somewhat overlapped, but a major concentration area was identified, especially for mother/calf pairs, which coincides with previously recognized aggregation area off Brazil.