

Lifetime reproductive success of Mute Swans *Cygnus olor* in Denmark.

P. ANDERSEN-HARILD and P.J. BACON

Lifetime cygnet production of Mute Swans in Denmark was heavily influenced by winter weather, which affected both survival through the first winter and age at first breeding. Once swans had begun to breed, their lifetime productions were strongly affected by their attained number of nesting attempts, which were also affected by winter weather. Annual breeding success was heavily dependent on whether the swans were nesting in large territories (85% hatching success per lifetime) or in a colony (55% hatching success). Colony swans that succeeded in producing cygnets achieved only 45% of the fledgling production of territorial swans, but, as many colonial swans totally failed to fledge any cygnets, their relative success was even lower; 25% assuming that all swans fledged from each area were equally likely to be found when breeding.

References

Bacon, P. J. & Andersen-Harild, Pelle, 1989. Mute Swan. In: Newton, Ian *Lifetime reproduction in birds*. Academic Press, pp. 363-386.

P. Andersen-Harild, Agency for Nature Protection, Ministry of the Environment, Slotsmarken 13, 2970, Horsholm, Denmark.

P. J. Bacon, ITE Merlewood Research Station, Grange-over-Sands, Cumbria, England.