

FEATURE ARTICLES

GROWTH OF BROWN PELICAN NESTLINGS EXPOSED TO SUBLETHAL LEVELS OF SOFT TICK INFESTATION

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Abstract. Ectoparasites are a common component of seabird colonies and are generally considered to have a negative impact on their hosts. Nest parasites such as the soft tick *Carios capensis* may pose a distinct threat to altricial nestlings confined to the nest and unable to escape infestation. To assess the potential effects of ticks on growth, we measured linear growth rates of Brown Pelican (*Pelecanus occidentalis*) nestlings during early development in relation to *C. capensis* infestation at insecticide treated and untreated nests at two colonies in South Carolina during the 2004 and 2005 breeding seasons. Tick infestation levels differed between colonies but not between years. We found a positive relationship between tick infestation and both growth rates and hatching success at the more infested colony. We did not find a consistent relationship between insecticide treatment and growth rates, although chicks from nests treated with insecticide had fewer ticks compared to chicks from untreated nests. Our study suggests that the cohabitation of ectoparasites and seabirds within colonies may result in behavioral or physiological adaptations of adults or nestlings that inhibit the expected negative effect of ectoparasites on nestling growth at sublethal levels of infestation.

Key words: *Brown Pelican, Carios capensis, ectoparasite, growth rate, Pelecanus occidentalis, seabird, soft ticks.*