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Abstracts

SHORT COMMUNICATIONS

ABSENCE OF DAILY RHYTHMS OF PROLACTIN AND CORTICOSTERONE IN ADÉLIE PENGUINS UNDER CONTINUOUS DAYLIGHT

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Abstract. Plasma prolactin and corticosterone levels were measured in free-living Adélie Penguins (*Pygoscelis adeliae*) at Torgersen Island, Antarctica (64°S latitude), at 4-hr intervals throughout the day during early January 1997 and examined for evidence of a 24-hr rhythm. At this season and latitude, natural daylight is continuous. No significant change in the plasma level of either corticosterone or prolactin was found across the day in this population. In contrast, hormone levels in birds at lower latitudes typically fluctuate between night and day. Our data would not have revealed circadian rhythms within individuals even if they exist, because each bird was only sampled once. The lack of hormone rhythms in the population, however, suggests that changes in light intensity at this latitude in the Antarctic summer are not sufficient to entrain, or perhaps even to maintain, circadian rhythms of individuals.

Key words: Adélie Penguin, continuous daylight, corticosterone, diel rhythm, light intensity, prolactin, *Pygoscelis adeliae*.