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WINTER CONDITION OF GADWALLS (*ANAS STREPERA*) IN SOUTHWESTERN LOUISIANA

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ABSTRACT—*Lipid reserves of Gadwalls (*Anas strepera*) wintering in southwestern Louisiana were determined from specimens collected from November 1984 through March 1985. Lipid levels of adult Gadwalls increased from November to March. However, a midwinter low in lipid reserves, as reported in a previous investigation, did not occur in the overall Gadwall population. Lipid levels of adult female Gadwalls decreased after January.*

We hypothesize that the differences between midwinter lipid levels observed in this study and those of previous studies resulted from environmental factors which covaried with temperature, and that the absence of a midwinter decline in lipids commonly occurs in Gadwalls during mild winters.

Key words: Anas strepera, *Gadwall, winter condition, lipids, Louisiana.*

INTRODUCTION

Waterfowl investigations have emphasized the importance of understanding waterfowl winter ecology and physiological condition (Lack 1968, Fretwell 1972, Jorde 1981, Krapu 1981, Reinecke et al. 1982, Haramis et al. 1986). Recent investigations of Gadwalls (*Anas strepera*) wintering in southwestern Louisiana showed increased deposition of body lipids in early winter, and that lipid reserves sharply declined during midwinter (Paulus 1980, 1983). Paulus (1980) hypothesized that January and February were critical months for Gadwalls because of a decline in abundance and nutritional quality of available foods, which caused a decline in Gadwall lipids.

We studied the winter condition (lipid levels) of Gadwalls, hypothesizing that lipid levels of Gadwalls may not decline during mild winters along the Gulf Coast. Paulus' (1980, 1983) data were not statistically significant, probably because of small sample size. We wanted to use enough samples to adequately test the hypothesis that lipid level decline is an obligatory event, and provide additional data for future hypotheses on winter condition of Gadwalls.

METHODS

We collected 243 Gadwalls from November 1984 through March 1985 (Table 1) from the Rockefeller State Wildlife Refuge (SWR), Cameron Parish,

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TABLE 1. Numbers and weights (N, W, SD) of Gadwalls collected during winter 1984–1985, from Rockefeller State Wildlife Refuge (Cameron Parish, Louisiana).

	Nov			Dec			Jan			Feb			Mar		
Age and sex	N	W	SD	N	W	SD	N	W	SD	N	W	SD	N	W	SD
Adults															
Males	24	995	88.6	33	973	66.2	23	995	63.8	29	963	79.5	24	985	59.5
Females	13	884	79.0	13	905	47.7	14	910	57.7	13	853	61.0	16	884	68.6
Juveniles															
Males	0	—	—	2	924	31.3	4	949	72.5	2	890	54.4	2	824	30.4
Females	13	836	57.6	1	966	—	8	778	48.2	3	849	114.7	6	801	50.7