

TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	3
Evolution and Distribution.....	3
Biology, Habitat and Behavior	3
Reproductive Biology and Polyembryony.....	11
Kin Selection and Altruism.....	13
III. MATERIALS AND METHODS.....	20
Study Site.....	20
General Methods.....	20
Behaviors Recorded.....	21
Data Collection	21
Analyses.....	25
Comparative Analysis.....	26
IV. RESULTS	34
General Patterns of Time Allocation	34
Temporal Effects.....	34
Animal Identity Effects.....	35
Environmental Influences	37
Comparative Analysis.....	38
V. DISCUSSION	57
Time Allocation as an Evolutionary Constraint.....	58
Temporal Effects.....	62
Animal Identity Effects.....	63
Environmental Influences	65

Summary	66
BIBLIOGRAPHY	68
APPENDIX A: IACUC Approval	85

LIST OF FIGURES

Figure 2.1: Distribution of the nine-banded armadillo.....	18
Figure 2.2: Depiction of <i>Dasypus novemcinctus</i> adult and juveniles	19
Figure 3.1: Map of the primary study regions at Yazoo National Wildlife Refuge.....	31
Figure 3.2: Representative images of three primary sampling areas at Yazoo National Wildlife Refuge.....	32
Figure 4.1: Average armadillo time budgets using 2007 Focal Data.....	54
Figure 4.2: Average armadillo time budgets using 2008 Focal Data.....	55
Figure 4.3: Average armadillo time budgets using pooled Scan Data.....	56

LIST OF TABLES

Table 3.1: Definitions of Behaviors Recorded.....	28
Table 3.2: Schedule of Focal Observations	30
Table 4.1: Time Budget Data for Wild Nine-banded Armadillos.....	39
Table 4.2: Differences in Time Allocation between Evening and Night Time Blocks	41
Table 4.3: Results of Regression Analyses Examining Potential Temporal Effects on Time Allocation.....	42
Table 4.4: Time Budget Data of Adult Female Nine-banded Armadillos that Differed in Lactational Status.....	43
Table 4.5: Results of Regression Analyses to Examine Relationships between Time Budgets and Weather Conditions	44
Table 4.6: Comparative Analysis of Mammalian Time Budgets.....	45
Table 4.7: Average Percent Time Spent Feeding Different Orders of Mammals.....	52
Table 4.8: Results of Regression Analyses Examining Relationships between Time Spent Feeding and Body Size, Group Size and Metabolic Rate	53