

1. INTRODUCTION

- Brazil : 9 million hectares of sugar cane plantations;
- Cane production: 642.1 million tons (43.7 % for sugar and 56.3% ethanol);
- Leaf-cutting ants: *Atta capiguara* and *Atta bisphaerica* – among the main insect pests of sugar cane
- Losses due to leaf cutters: 1 nest/ha = 3 tons/ha = 450kg of sugar or 300L of alcohol.
 - Areas have more than one nest/ha – losses around ~ 50 ton/ha in the sugar cane crop cycle;
- Control strategies: Chemical – termal fogging or granulated baits
Alternatives are necessary: Biological — Natural enemies
- Objectives: To survey the parasitoid species of *Atta bisphaerica* and evaluate some aspects of their biology to provide support for biological control in the field.

2. MATERIALS AND METHODS

- The host ants were captured every 15 days in the field in the vicinities of Viçosa, Brazil;
- Ants were collected between 07:30am and 11:00am during one year to include the rainy and the dry seasons;
- Total number of collected ants = 91,554 (average of 953 ants/nest/collection date); Four nests surveyed.
- Ants were taken to the Insectary at UFFV. These individuals were maintained separately in climatic chambers until the parasitoids eventually emerged or the ants died from other causes.

3. RESULTS AND DISCUSSION

- Three species of parasitoids were found;



Apocephalus attophilus
Borgmeier 1928

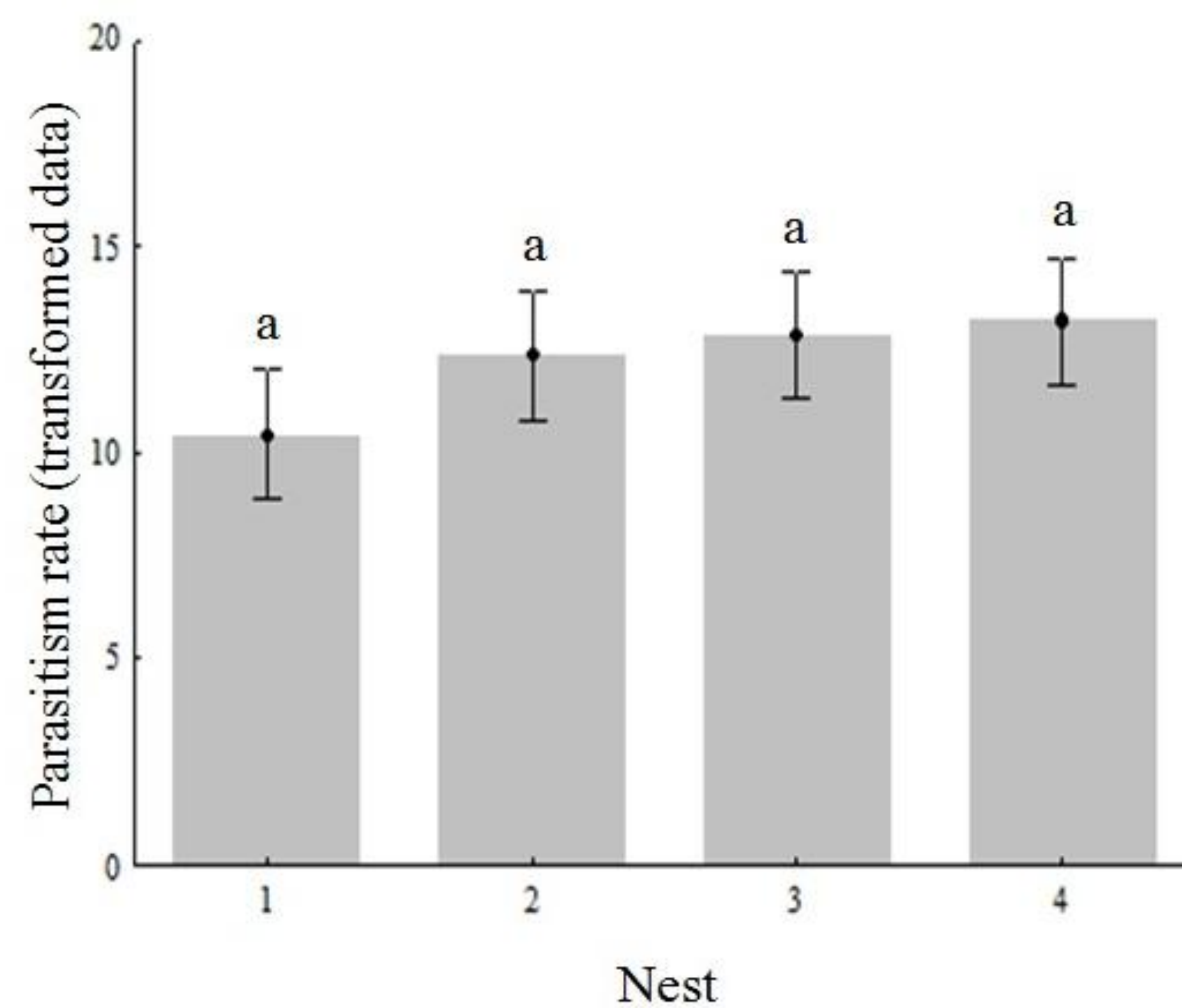
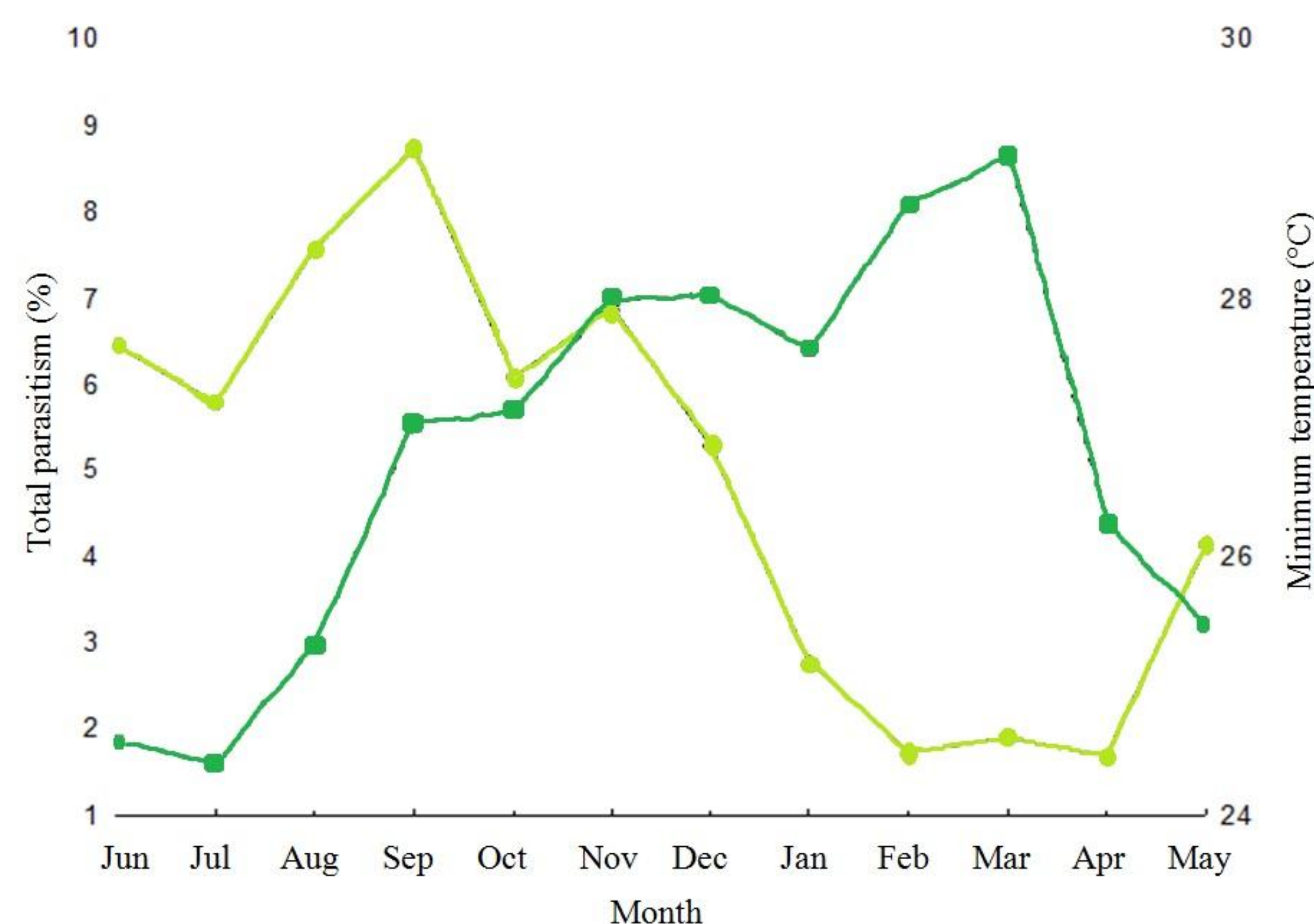


Eibesfeldtphora bragancai
Brown (2001)

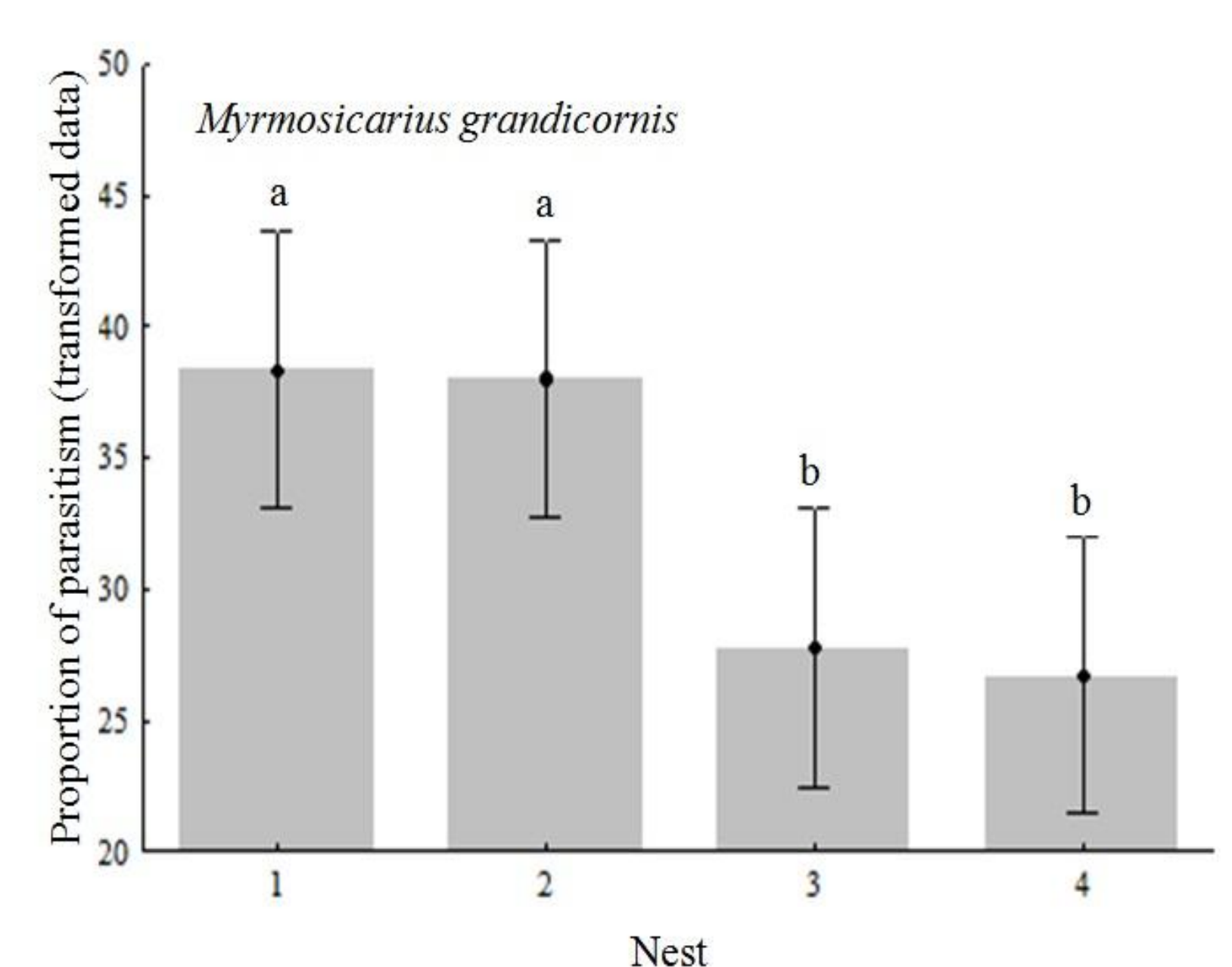
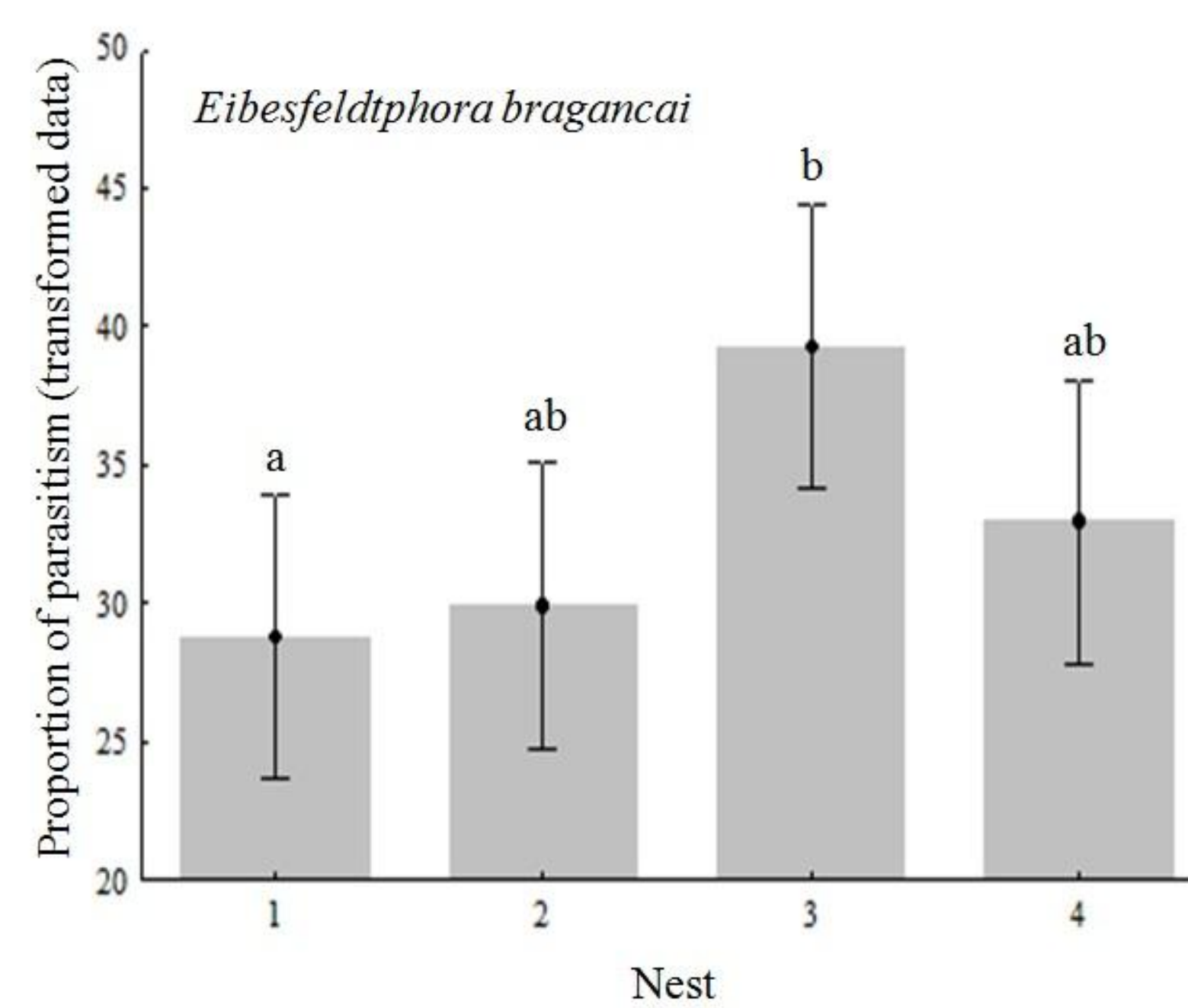
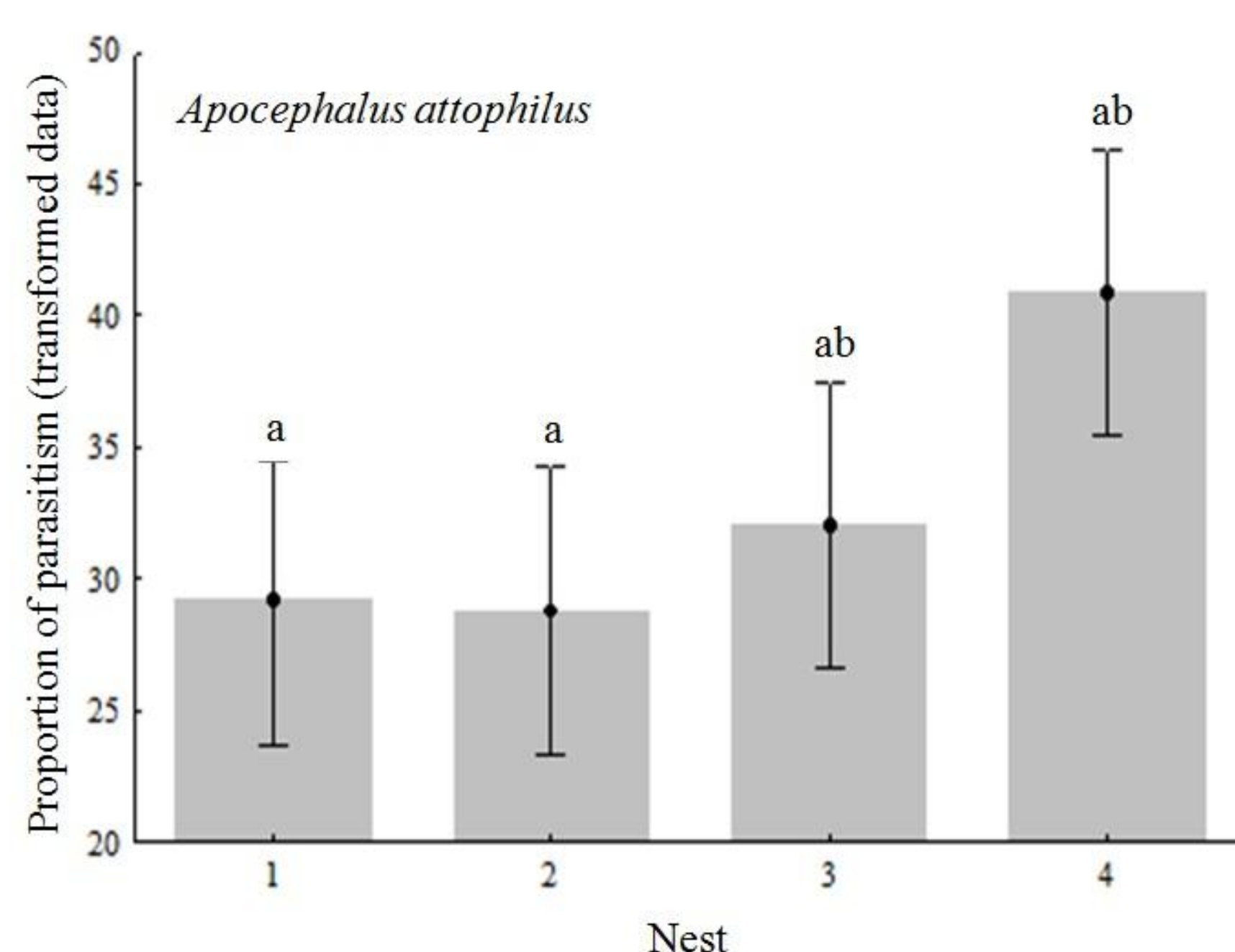


Myrmosciarius grandicornis
Borgmeier 1928

- The highest total parasitism values were obtained in September – Dry season
- The lowest values were obtained in February – Rainy season



- The total of parasitism: 4.4%
- Indirect effects of the attack: ants runaway; ran in zigue-zague pattern or played dead; abandoned leaf fragments in the trails and foraging activity was reduced after attack.



4. CONCLUSIONS

- Further studies on these species of Phoridae flies will support the use of these natural enemies as another tool in Integrated Pest Management for sugar cane fields in Brazil in the future.