Conclusions

This thesis provides detailed insight into plant-animal relationships that are involved in reproduction of inselberg species. The results are interpreted in relation to the ecosystem functioning and they also contribute to the general knowledge on specialization in plant-animal interactions (Chapter 2 and 3), floral resources (Chapter 2, 3, and 5), pollinators' attraction (Chapter 2), relations between diaspore's characteristics and animal dispersal (Chapter 4), and conflicts among plant life stages that follow ovule fertilization (Chapter 4).

As *Clusia* aff. *sellowiana* dominates the shrub vegetation, the study on its reproduction is the initial step to understanding the dynamics of the shrub patches and potential succession on the inselberg. The nocturnal pollination system of *Clusia* aff. *sellowiana* bears unusual characteristics and signs of specialization. Only one pollinator species, a cockroach *Amazonina platystylata*, was recorded and this species is apparently sensitive to olfactory attraction cues emitted by the flowers. This is the first evidence of pollination system that involves cockroaches as pollinators and is to some degree specialized. *Clusia* aff. *sellowiana* is dispersed by small birds. Because its diasporas are consumed by birds and there is a time lag before they are deposited, the dispersal to other shrub patches, other inselberg plant communities and more distant places of the rock savanna is probable. However, the life stages following ovule fertilization exhibit high mortality that might hinder establishment of a new genet and colonization of open sites. Local persistence of individuals is certainly supported by extensive vegetative growth.

In *Clusia nemorosa*, local conditions also influence the processes before as well as after ovule fertilization. I demonstrated spatial variability in the pollinators' assemblage, differences in floral resource exploitation, and variation in pollination mechanisms. I did not prove the importance of floral resin as a reward that would promote the pollination because both flower sexes can provide this reward to pollinators. Surprisingly, the key pollination mechanism combines two rewards. Pollen is collected on male flowers while resin exclusively on female flowers. Seed dispersal is affected by seed size and composition of the inselberg frugivores 'assemblage. Frugivores feeding on *C. nemorosa* diaspores are small birds that usually do not ingest the seeds but only remove the aril. Most seeds are deposited under the mother tree. Thus, colonization of open sites or other shrub patches is limited.

Finally, I explored the reproduction of a mat-forming bromeliad *Pitcairnia geyskesii*. Monocotyledonous mats are typical feature of inselberg ecosystems and cover significant area of the Nouragues inselberg. *Pitcairnia geyskesii* sexual reproduction is negatively influenced by pollen-robbing stingless bees that damage more than half of all flowers. In contrast to this finding, the genetic variability of *P. geyskesii*, which has been investigated by other authors, is relatively high. Possibly, the accumulation of genotypes due to genets' life span can provide an explanation of this situation.

This thesis provides elementary information on the reproduction of important inselberg plants and shows that it is closely linked to the demands and behaviour of local animal species. In future, this information may help in interpretation of vegetation dynamics on the inselberg.