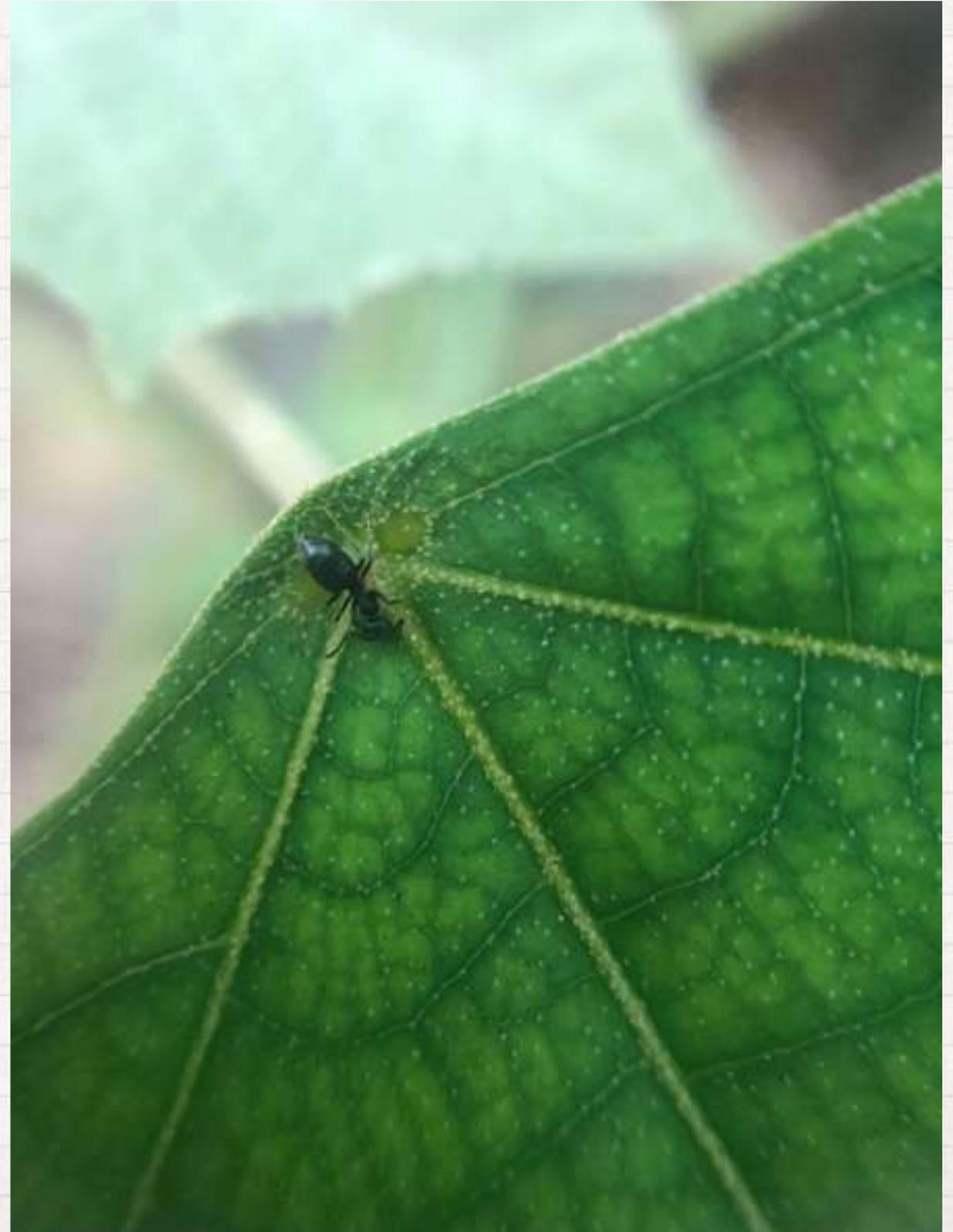


LOOKING INTO THE INVISIBLE
BIOLOGICAL WORLD
ANTS AND
EXTRAFLOURAL
NECTARIES

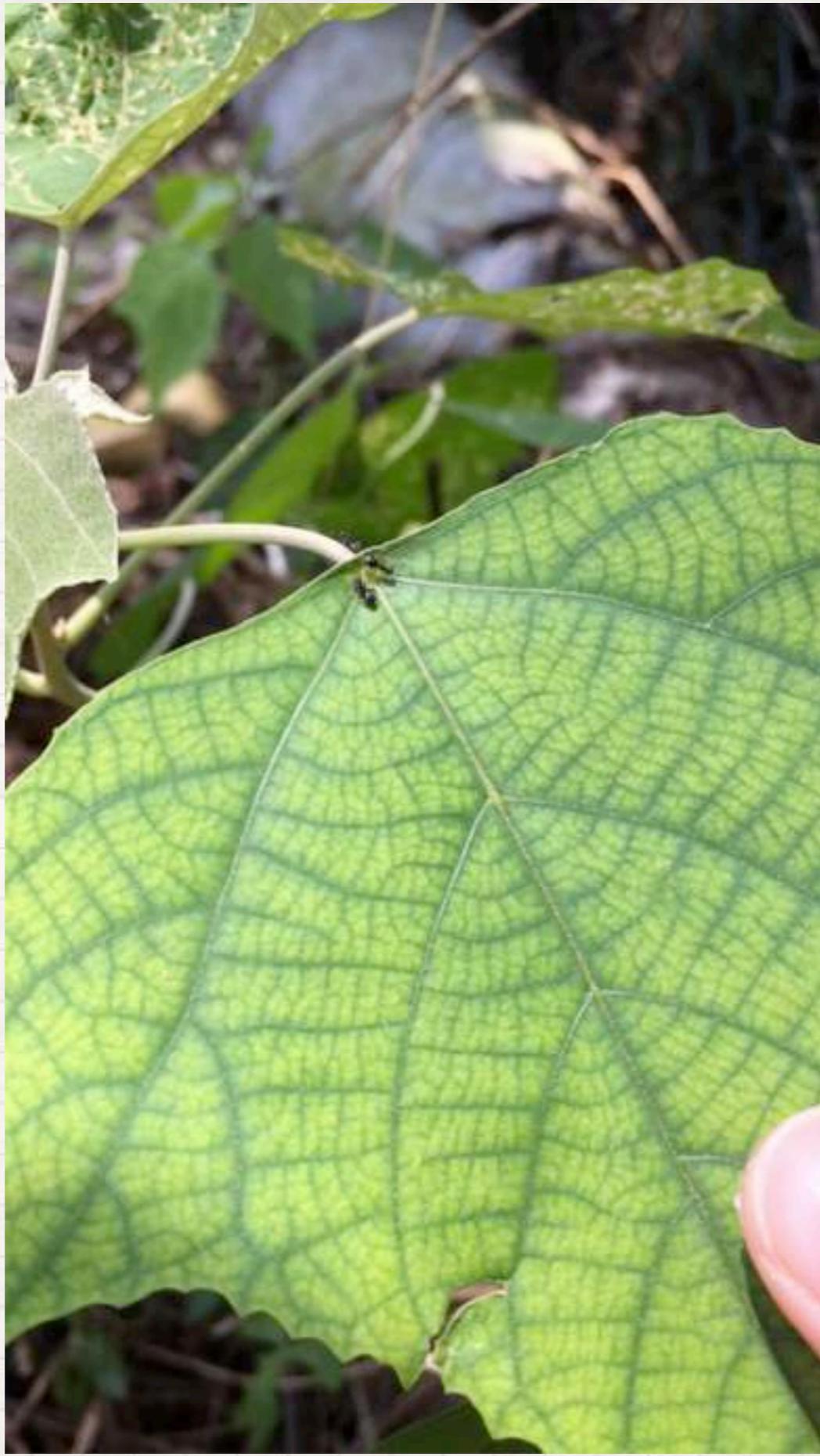
Group 5
TWPHCYMC School

ANTS' PREFERENCES ON DIFFERENCE PANICLED MALLOW LEAVES

- In 3 studied plants, 12.5% to 45% of leaves have visiting ants
- There are more ants in the shaded area than in the illuminated area.
- There are nectaries without visiting ants.
- The ants are evenly distributed on the leaves of the same plant.

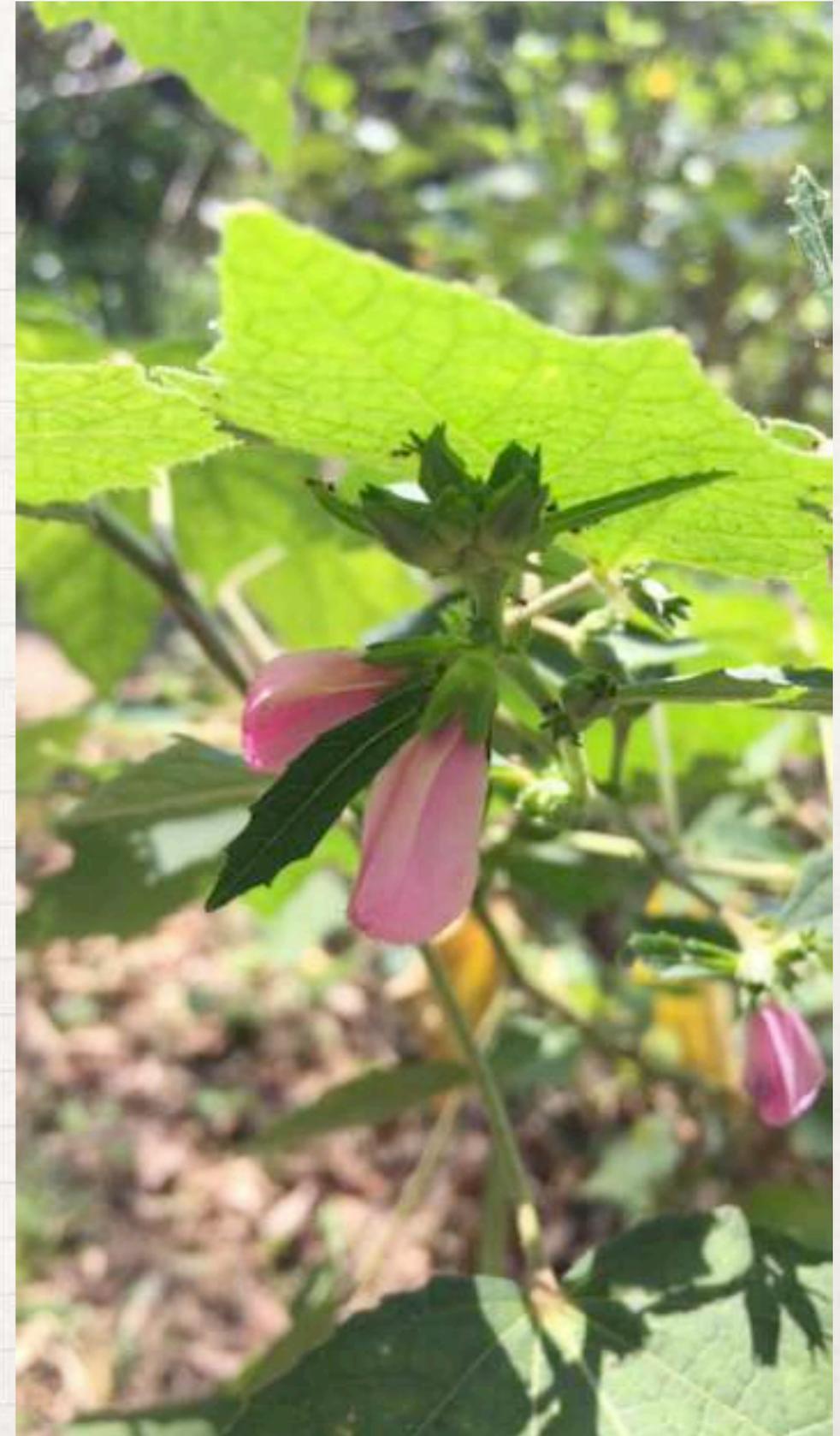
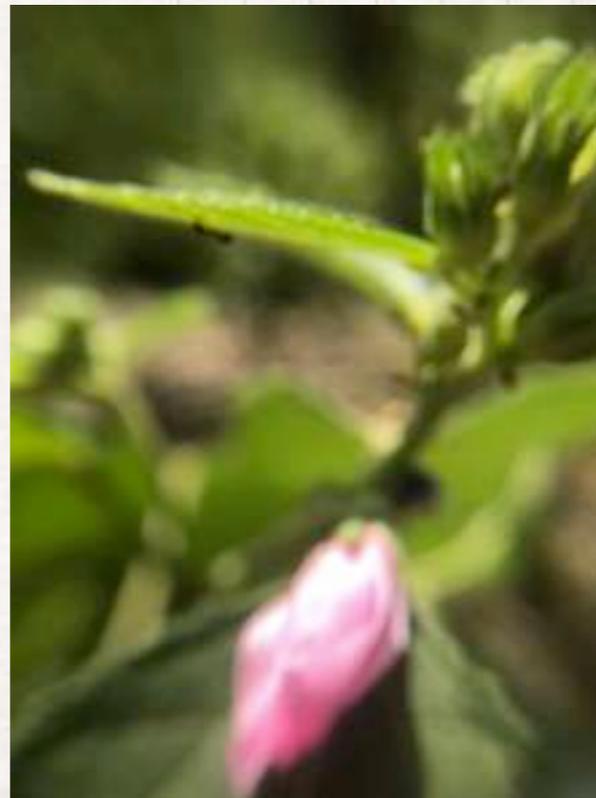






ANTS' PREFERENCES ON ROSE MALLOW LEAVES

- 1 Rose Mallow is studied, of leaves have visiting ants
- All nectaries have visiting ants.
- The ants are distributed evenly.



ANTS' PREFERENCES ON WINGED CASSIA

- In 2 studied plant
- variation under shaded environment and under direct sunlight?
- There are nectaries without visiting ants.
- The ants are evenly distributed on the leaves of the same plant.



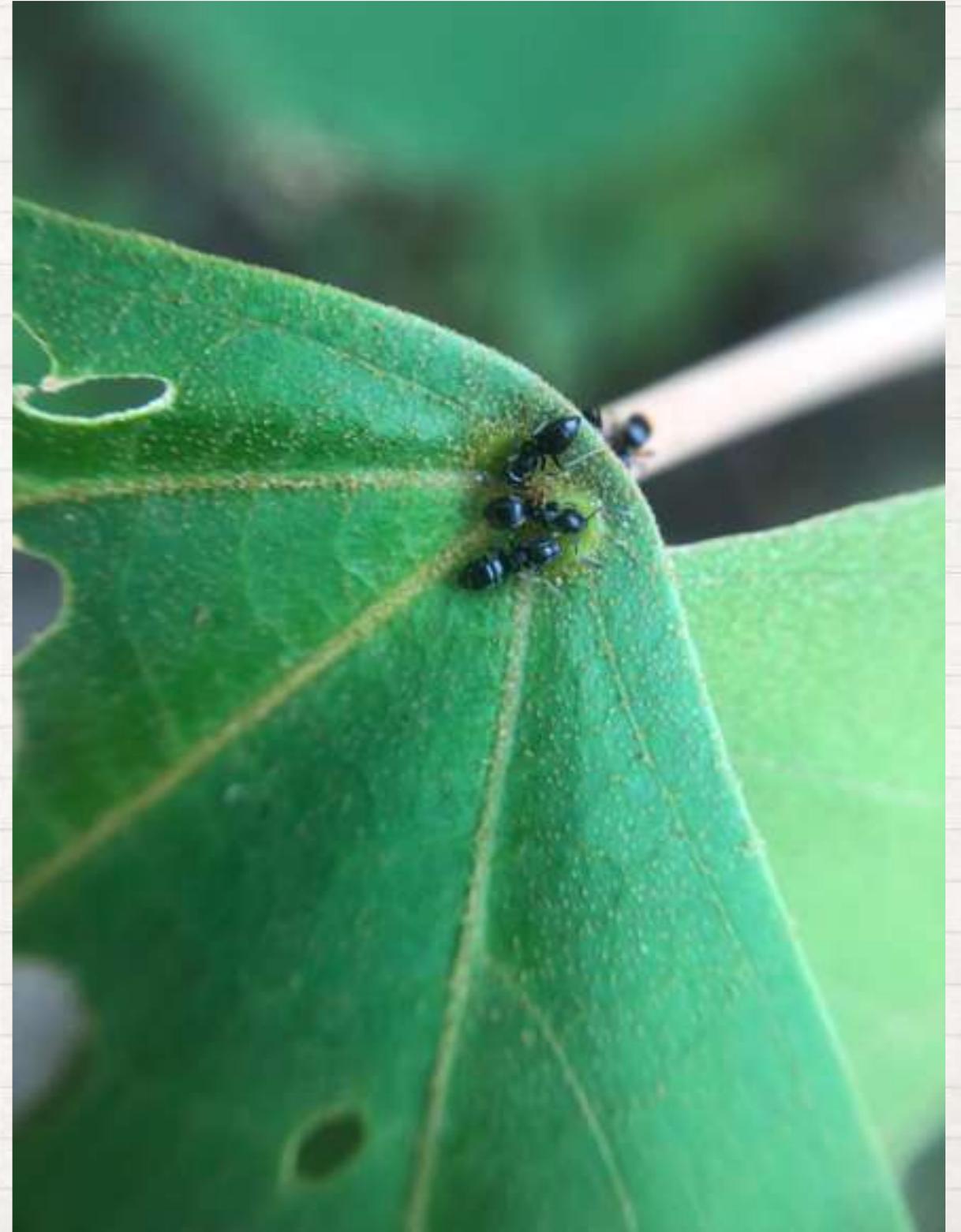


PLANT SIZE AND VISITING ANTS

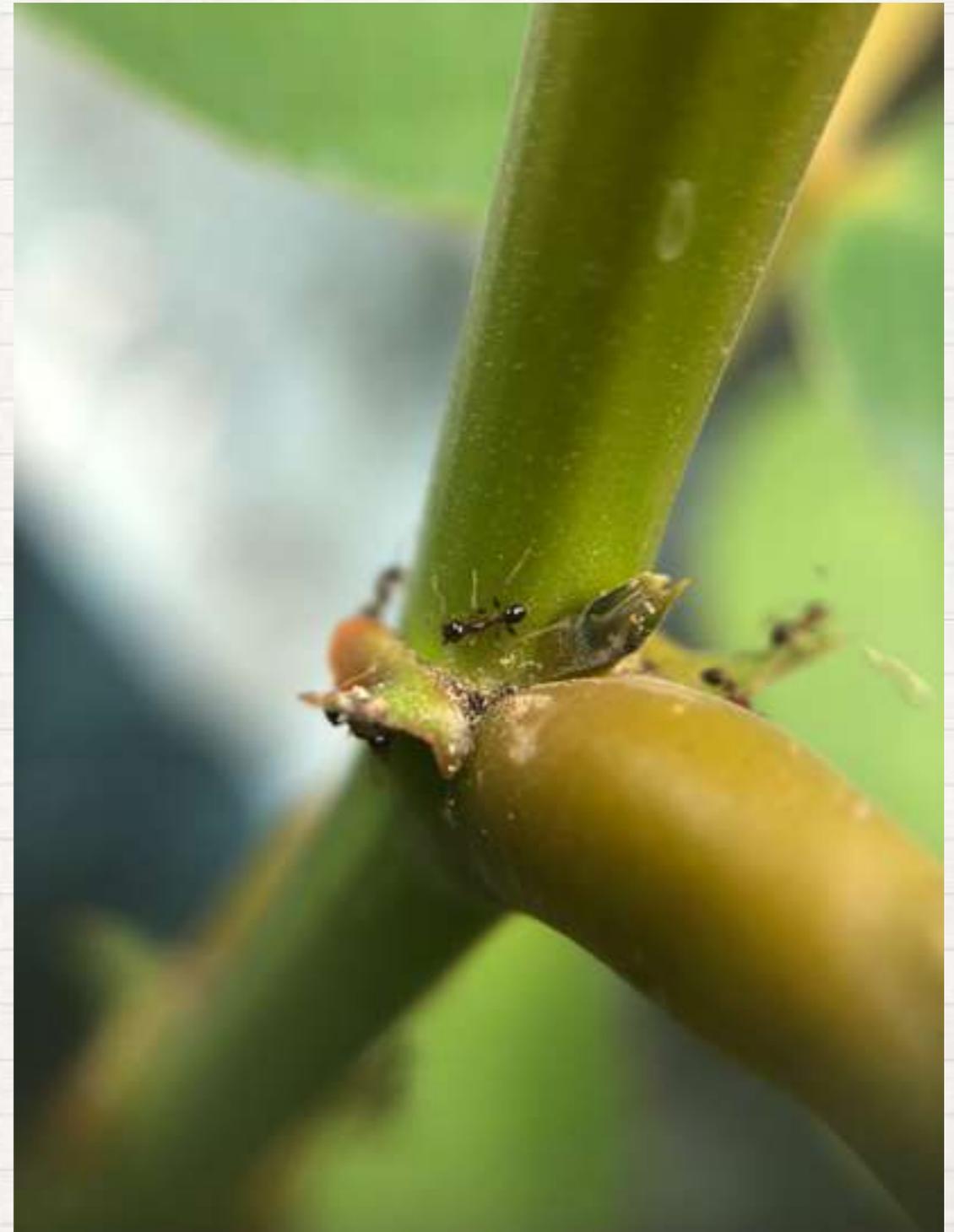
- In 3 studied plants, ranging from 0.3m (Panicked Mallotus) to 0.8m (Winged Cassia) high
- The larger the plant size, the more the ants.



ACTIVITIES OF VISITING ANTS ON THE EXTRAFLORAL NECTARIES

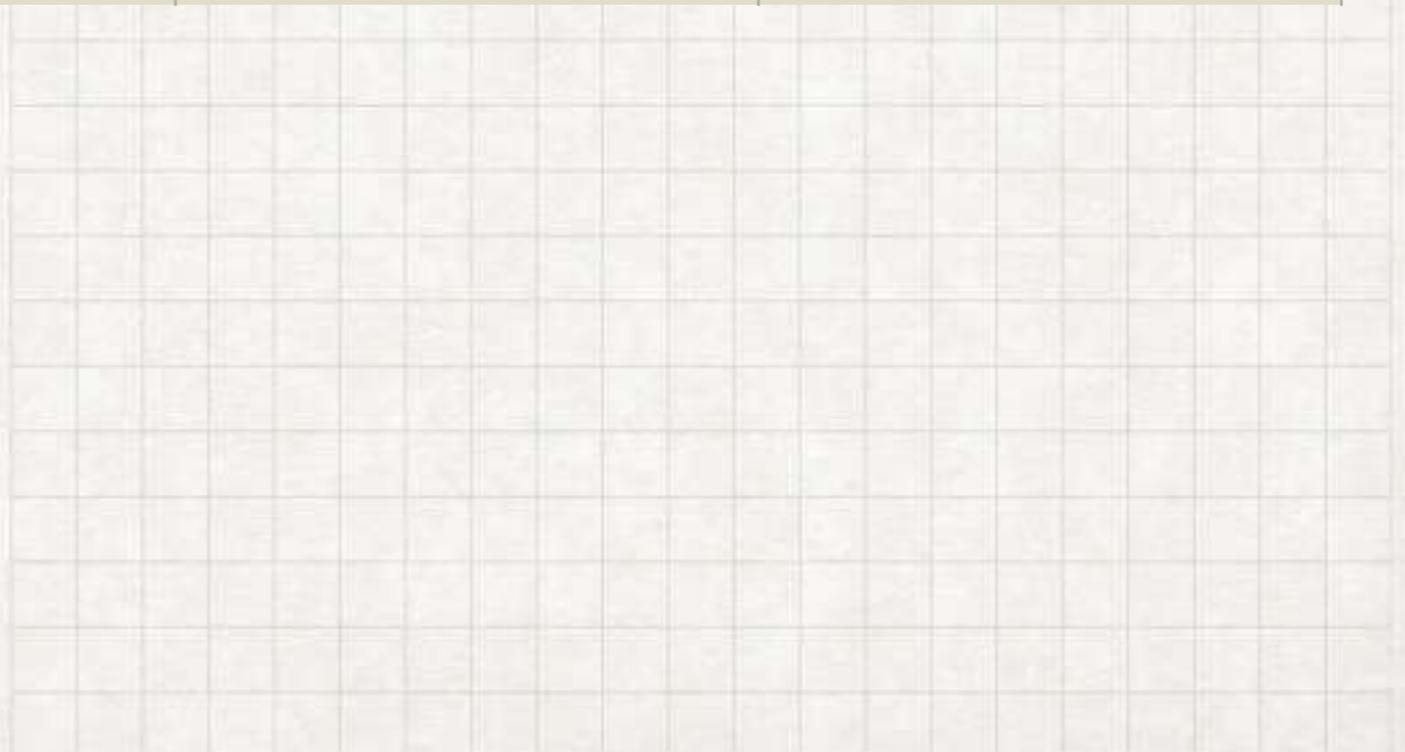


ACTIVITIES OF VISITING ANTS ON THE EXTRAFLORAL NECTARIES



COMPARISON BETWEEN THE THREE PLANTS OBSERVED

	Panicled Mallotus	Rose Mallow	Winged Cassia
No. of broken leaves	+++	+	+
Size of leaves	+++	+	++
Heights	+	++	+++
No. of ants	+	+++	++
Size of ants	+++	+	++



HOW WELL IS THE PLANT PROTECTED FROM BEING ATTACKED BY HERBIVORES



HOW WELL IS THE PLANT PROTECTED FROM BEING ATTACKED BY HERBIVORES

- Out of the 3 plants investigated, one of the plant ,Panicled Mallotus had been severely attacked by herbivores, with 5 to 34 holes.



DISCUSSION

- Compare amount of ants visiting Panicked Mallotus and that visiting Rose Mallow is observed. Is amount of extrafloral nectaries related to amount of visiting ants? Yes , the more nectaries it produces the more ants visit.
- How well is the plants with extrafloral nectaries protected from damages by herbivores? Average but except the Panicked Mallotus.
- How is location of the extrafloral nectaries affect the amount of visiting ants? Briefly discuss. The plant secretes the nectaries at the bottom leaves and stem attracts more ants compared to those plant on the leaves surface.