



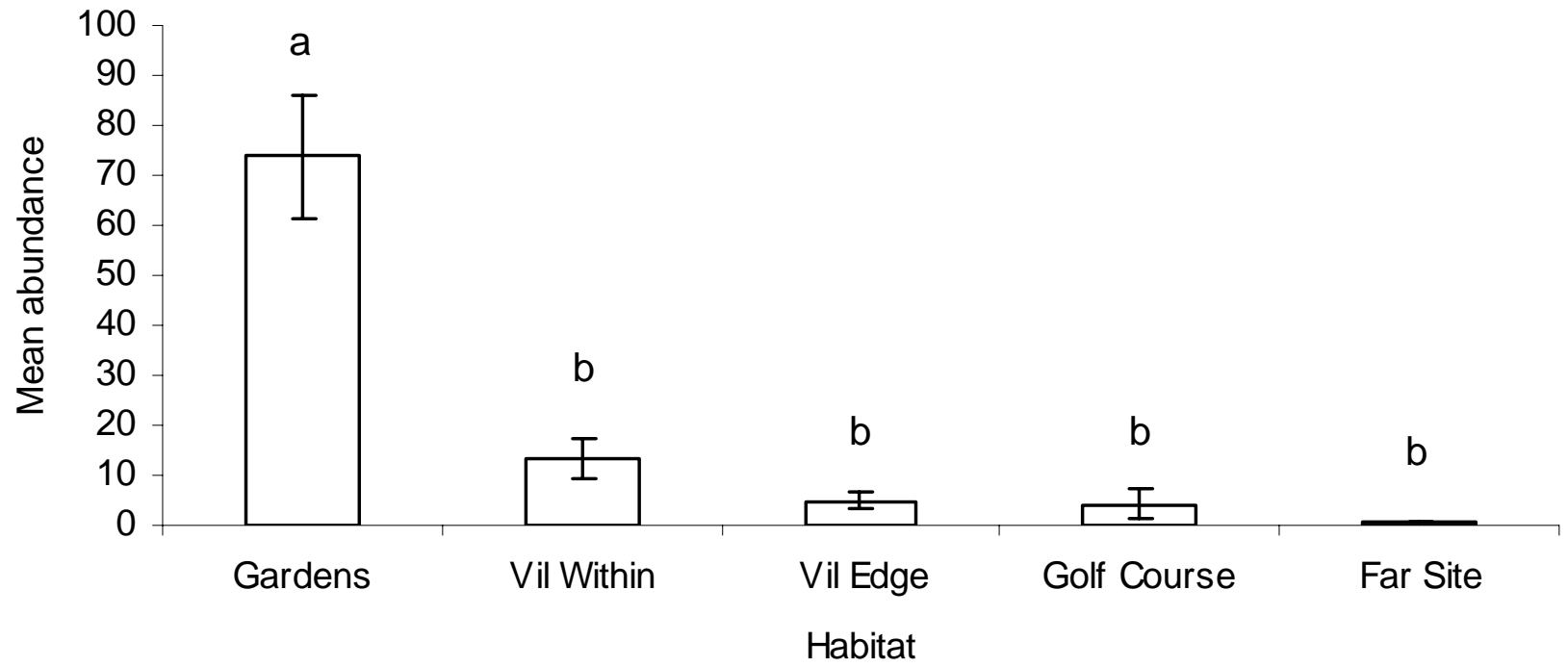
Current spread and mode of dominance of a new potential ant invader in Kruger National Park

South African  
NATIONAL PARKS

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- Objectives:
  - *Lepisiota incisa* distribution in Skukuza



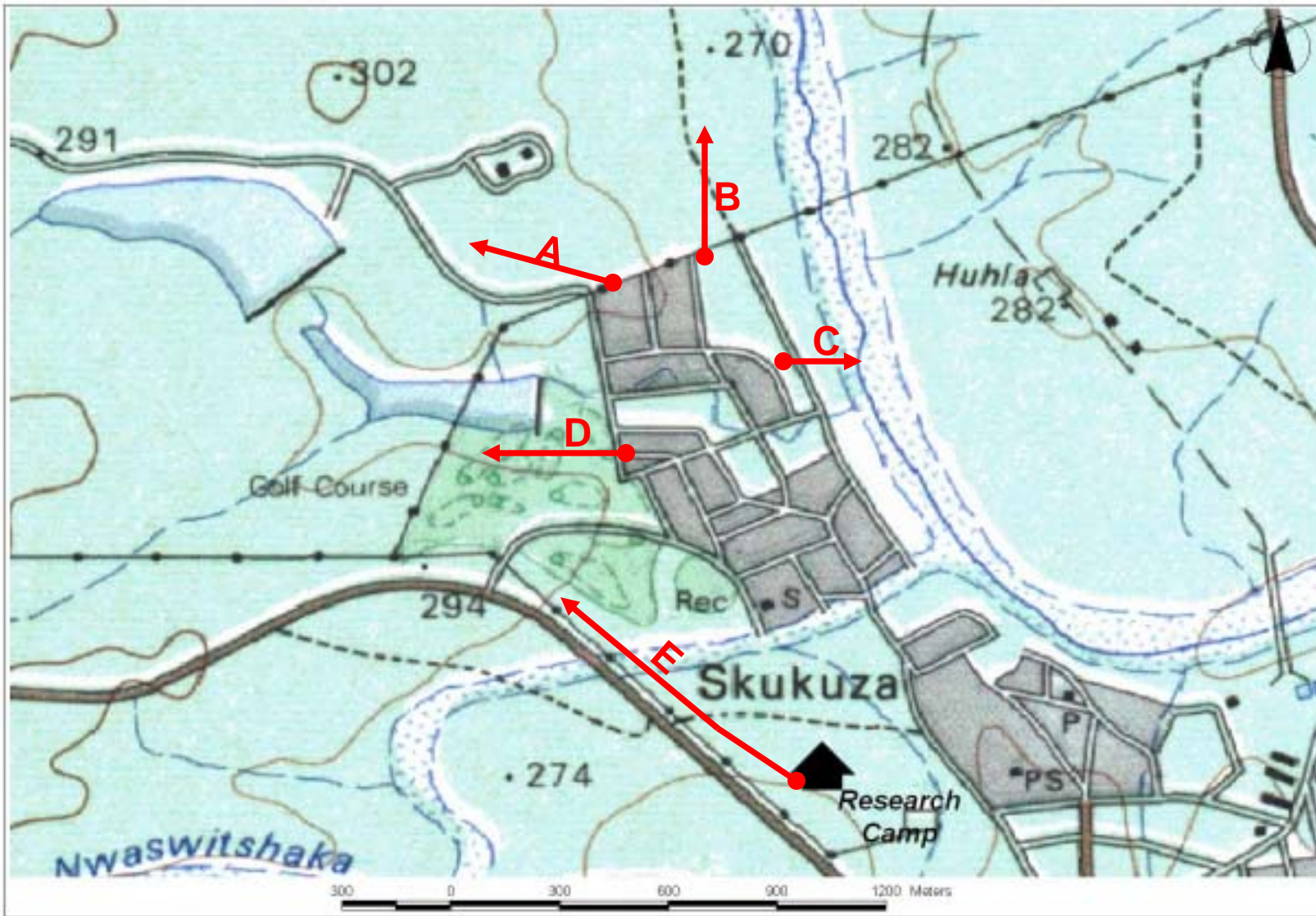


- Objectives:
  - Kin recognition levels between *L. incisa* nests

# Methods

- Study Area: Skukuza
  - Study Sites:
    1. Village gardens
    2. Natural areas within the village
    3. Far sites (>1km from Skz)

# Methods : Distribution

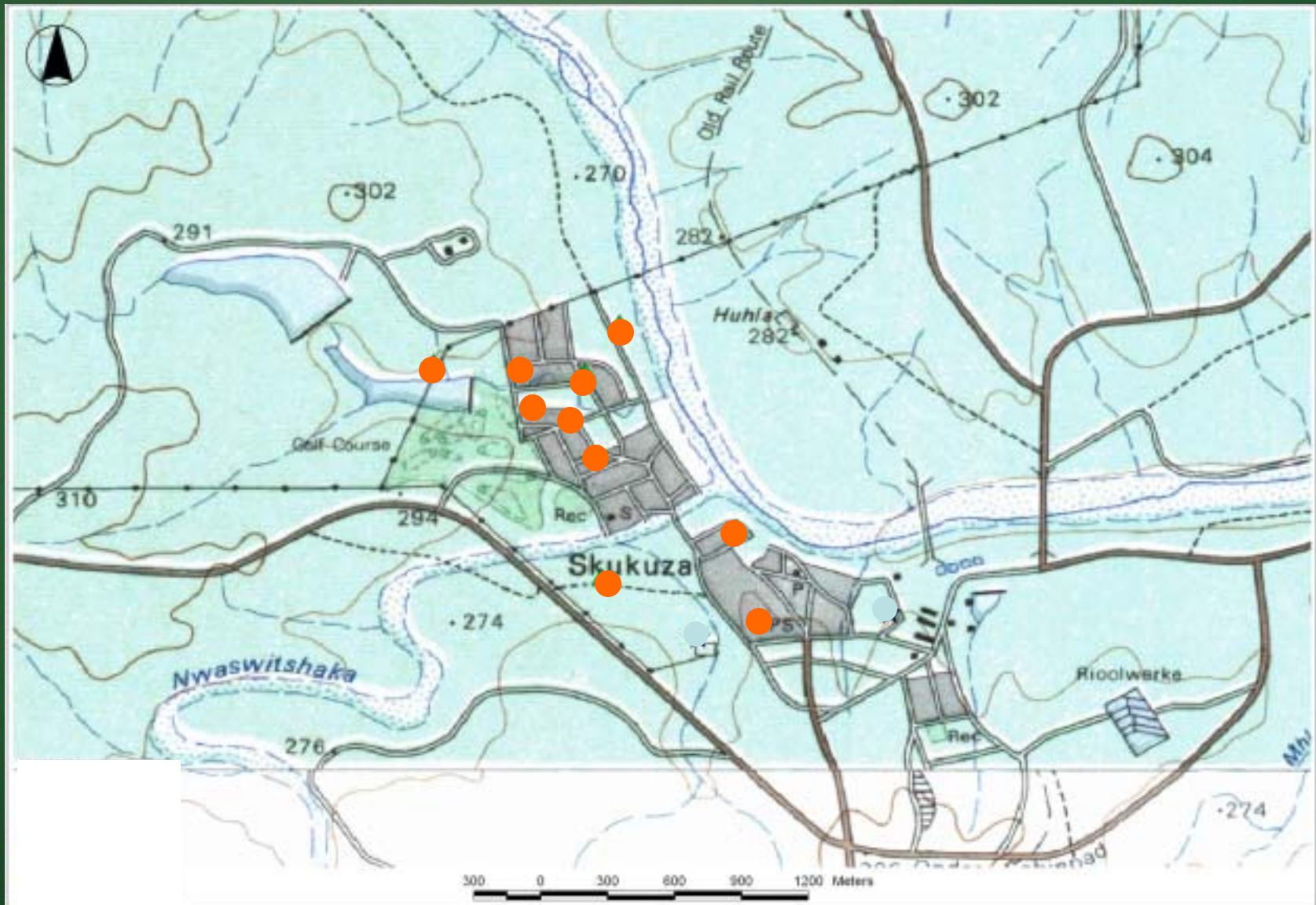


# Methods: Dominance mechanisms

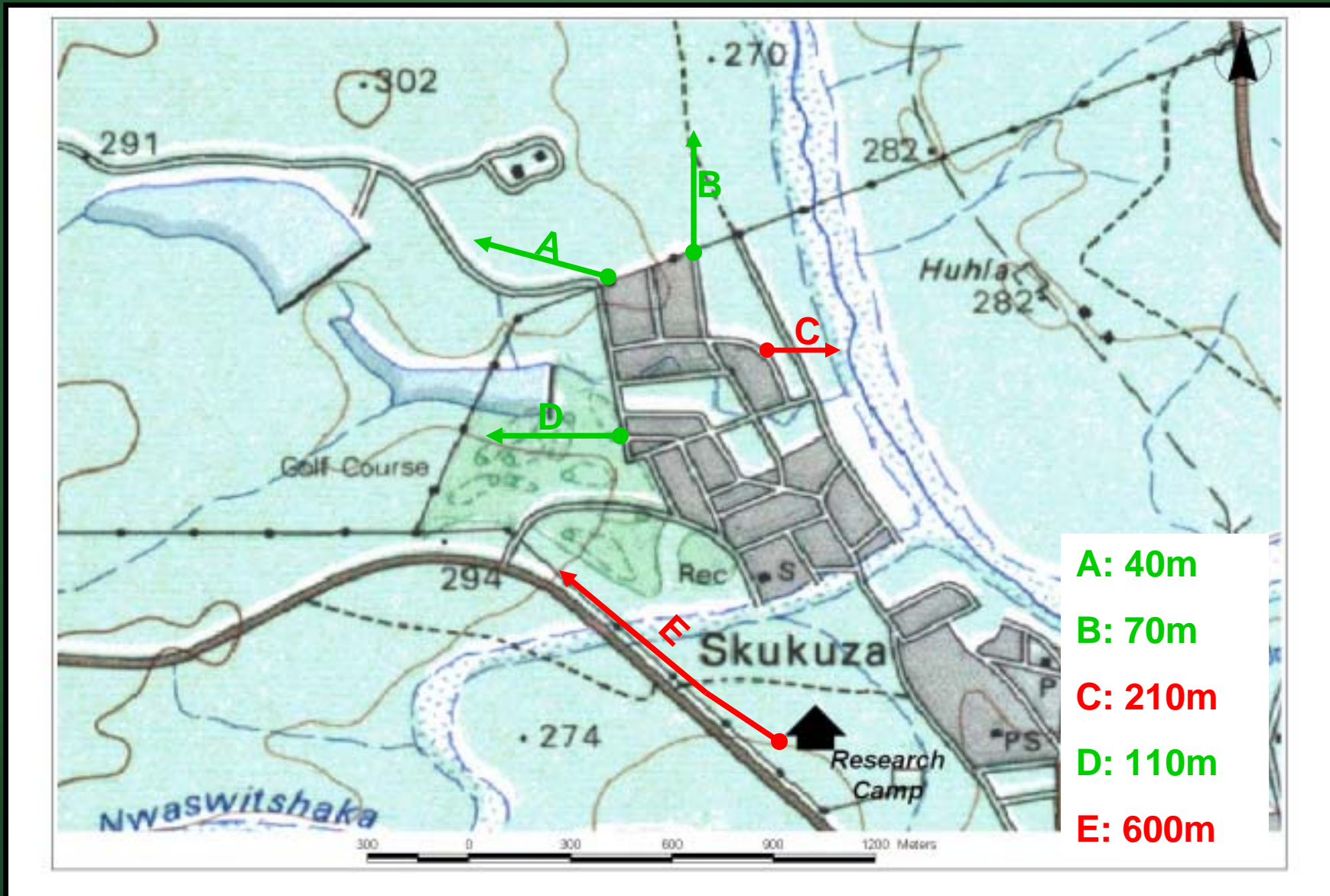
## Baiting transects

- 15 baits along a 75m transect
- 10min intervals for 40min
- Species recruitment and persistence
- Interaction between *L. incisa* & other spp.

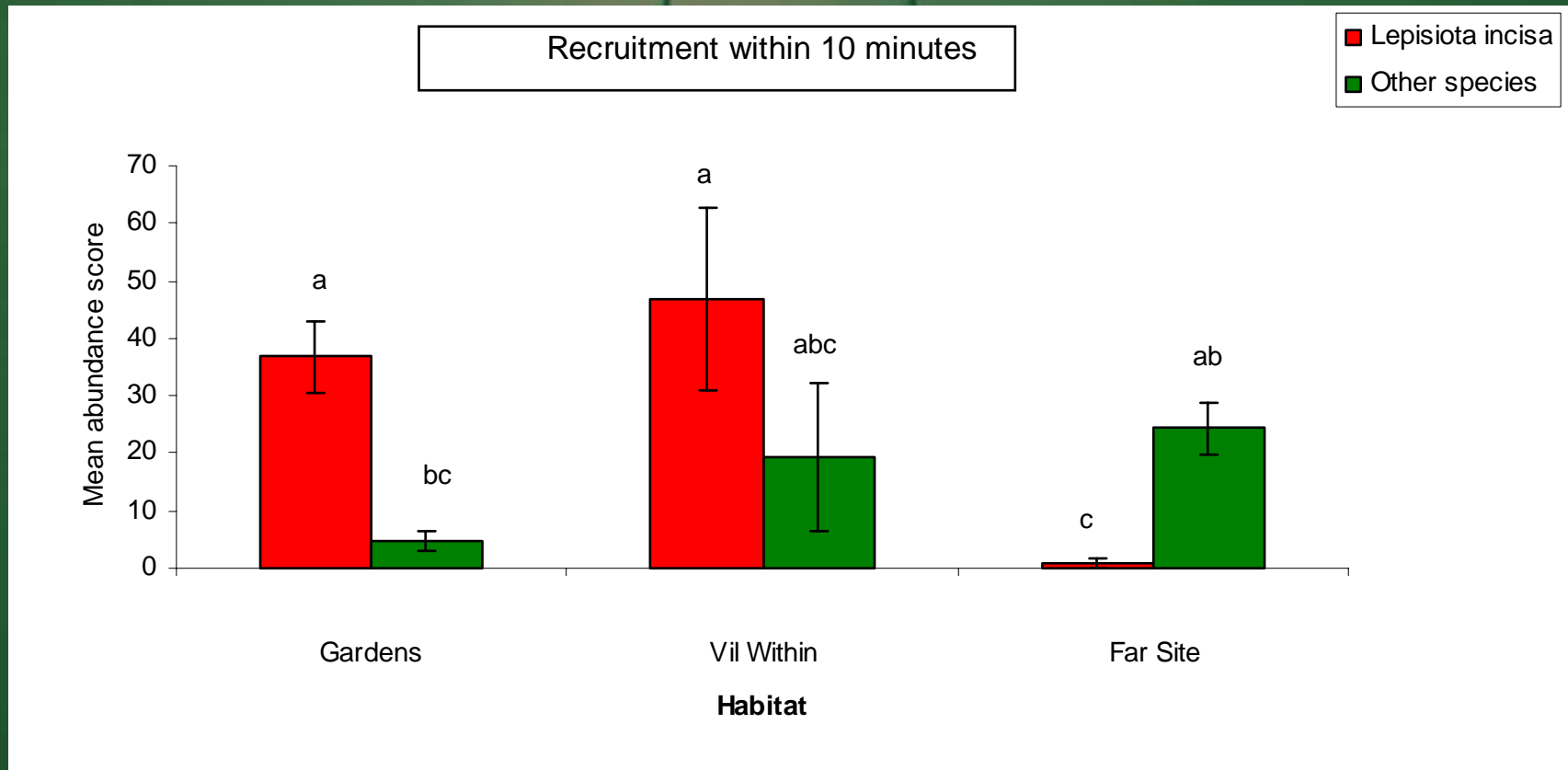
# Methods: Kin recognition levels



# Results & Discussion: Distribution



# Results & Discussion: Dominance mechanisms

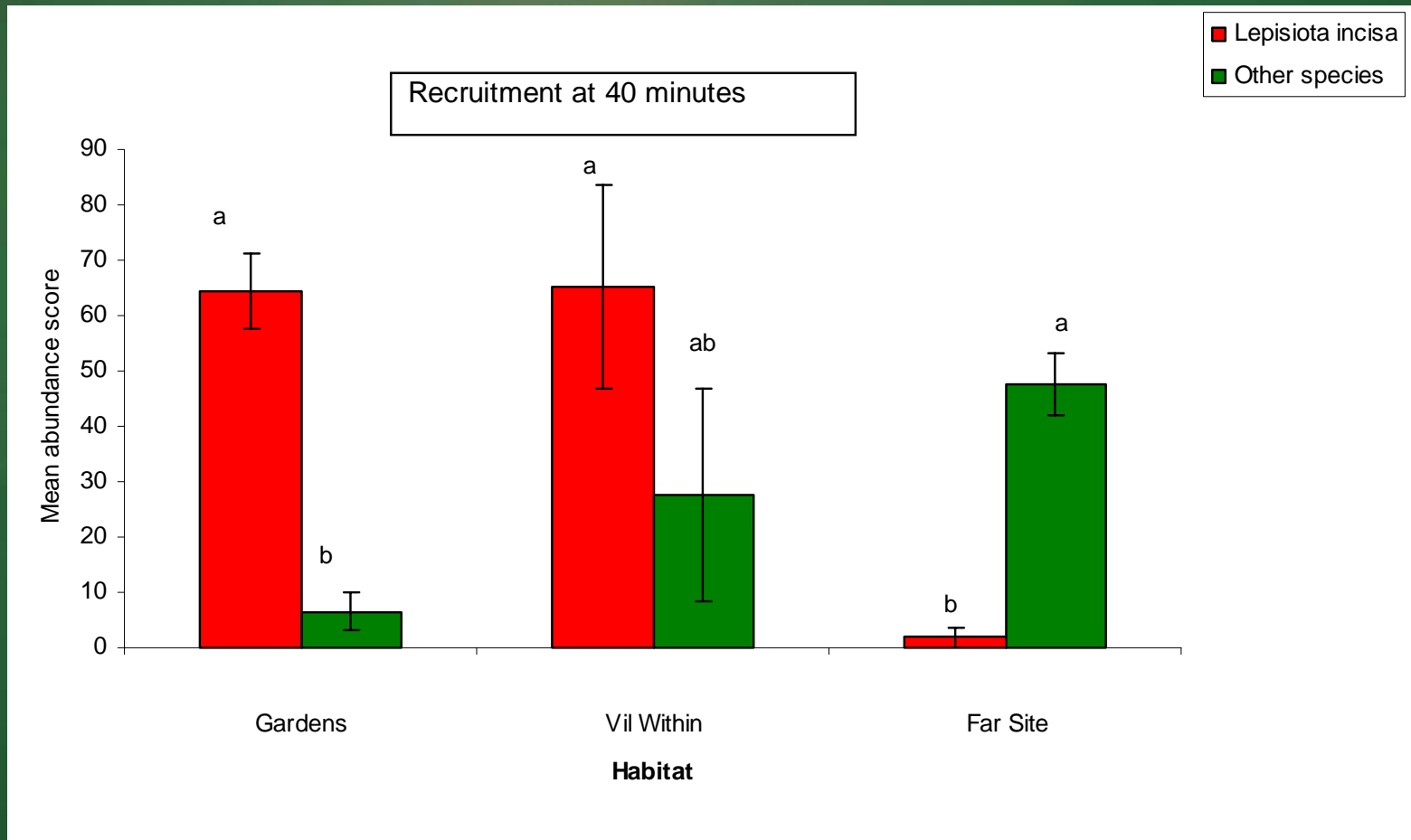


# Results & Discussion: Dominance mechanisms



Baits discovered by <i>L. incisa</i> (10mins)		
Gardens	Vil. Within	Far Site
81.5%	75%	33.3%

# Results & Discussion: Dominance mechanisms



# Results & Discussion: Dominance mechanisms

Reaction of *L. incisa* towards other ant species

Aggression			Avoidance			Coexistence		
Gardens	Vil Within	Far Site	Gardens	Vil Within	Far Site	Gardens	Vil Within	Far Site
3	12	0	8	5	0	57	18	13
13%			11%			76%		

# Results & Discussion: Kin recognition levels

Paired Nests	Ignore	Antennation	Avoidance	Spraying	Fighting	Total aggression level
1 & 2	0	0	0	0	10	40
1 & 3	0	0	0	0	10	40
1 & 6	0	0	0	0	10	40
1 & 4	0	0	1	0	9	38
1 & 7	0	0	1	0	9	38
1 & 8	0	0	1	0	9	38
1 & 5	0	0	2	2	6	34
1 & 9	0	0	3	1	6	33
3 & 5	0	9	1	0	0	11
3 & 4	0	10	0	0	0	10
2 & 3	4	5	1	0	0	7
2 & 8	5	5	0	0	0	5
4 & 5	5	5	0	0	0	5
3 & 9	7	2	1	0	0	4
4 & 8	9	1	0	0	0	1
4 & 9	10	0	0	0	0	0
5 & 8	10	0	0	0	0	0

## Conclusion

- *Lepisiota incisa* distribution limited to human disturbed areas
  - » Village gardens, Rubbish dump, picnic sites, rest camps
- Able to discover and dominate food resources more effectively than other ant spp
- Breaks dominance-discovery rule

# Conclusion

- *Lepisiota incisa* likely to have been introduced
  - » Not present in Natural Bush far from Skukuza
  - » Low kin recognition
  - » Village is an entry point
  - » Also found at picnic sites and other camps
- Potential to spread
  - » Riparian areas
  - » Roads

# Acknowledgements



- Sandra MacFadyen - GIS support
- Velly Ndlovu - Field Assistance
- Mmoto Masubelele - Field Assistance