Field investigation on *Trypanosoma evansi* in camels and horses from the Districts of Lahore, Kasur and Gujranwala in Punjab, Pakistan

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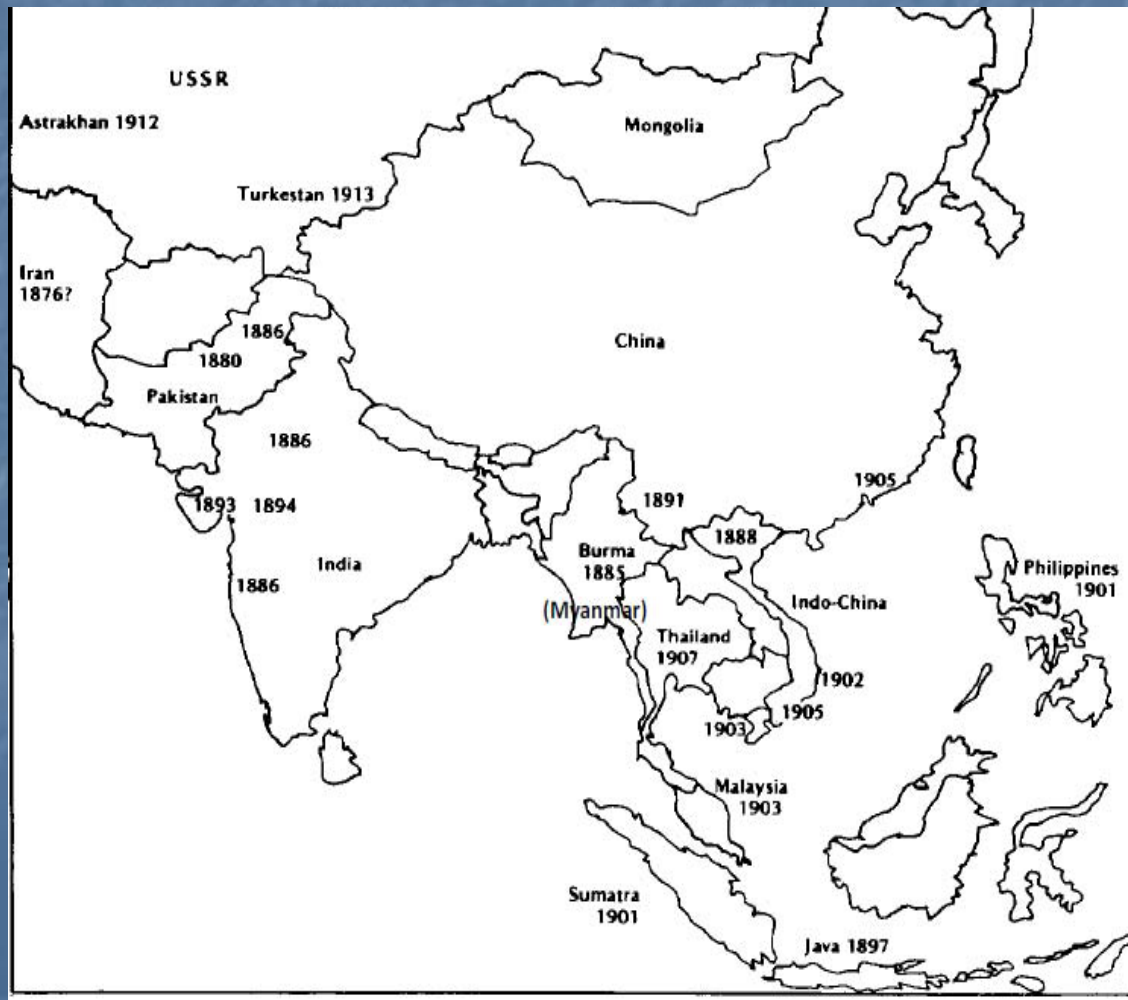
Distribution of surra in Asia

Current status

Bhutan, Cambodia, China, India, Indonesia, Iran, Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Thailand, Vietnam

First occurrence

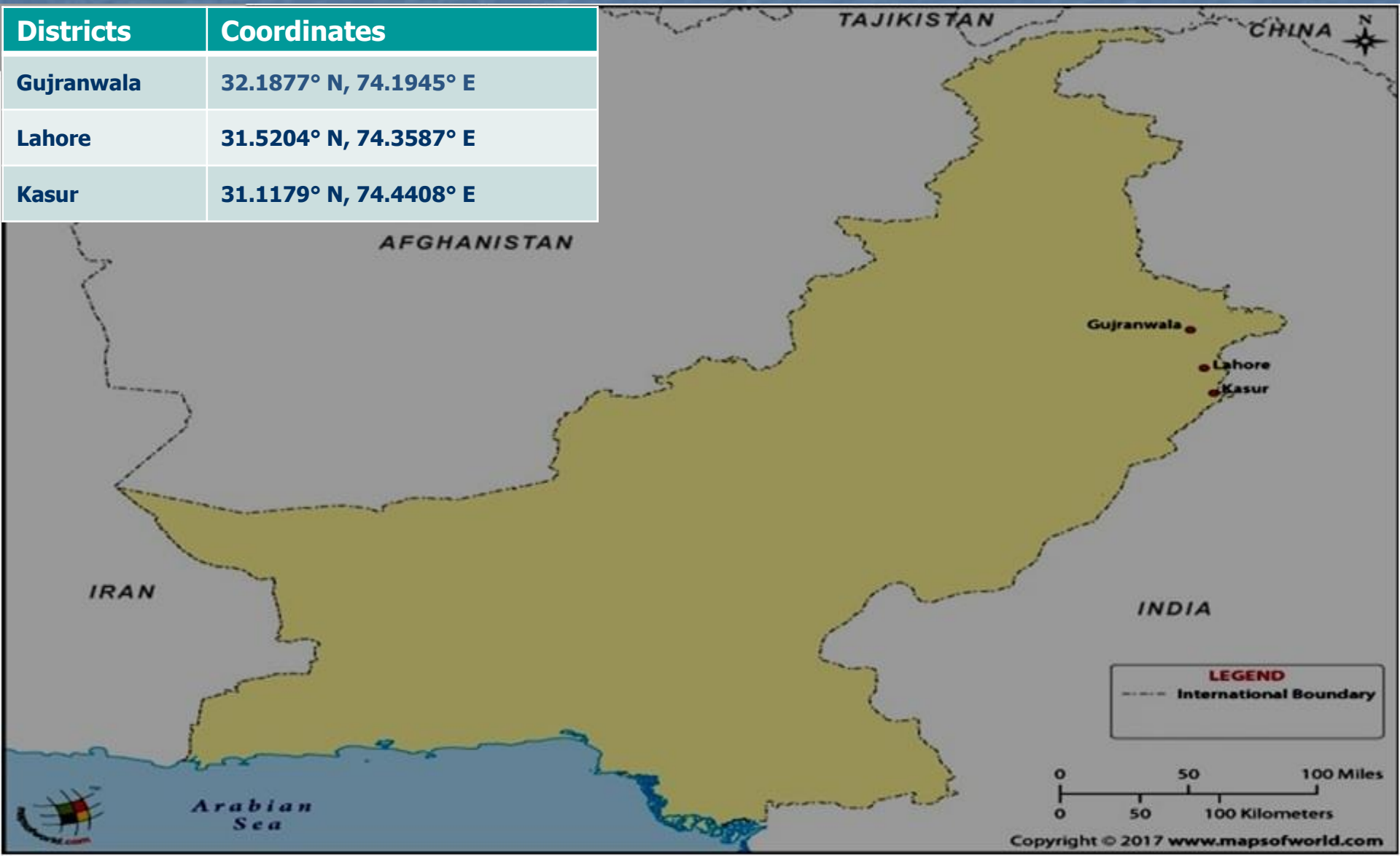


Study Objective

- To estimate *T. evansi* prevalence in camels and horses visiting and residing in different districts (Gujranwala, Lahore, Kasur) of Punjab, Pakistan.

Study area

Districts	Coordinates
Gujranwala	32.1877° N, 74.1945° E
Lahore	31.5204° N, 74.3587° E
Kasur	31.1179° N, 74.4408° E



Study animals and sampling

- Dromedary camels (n=550) and horses (n=215) of all genders, breeds and age groups.
- The animals were managed under pastoral production systems and were short staying in the three districts.
- Every 5th animal was selected from the population from March 2017 to September 2017.
- 5 ml of blood samples were drawn from the jugular vein
- Record: age, gender, breed, previous trypanocide treatment, history of abortions, weight estimation and clinical examination

Analysis

- Parasitological test
  - Giemsa stained thick drop
- Molecular tests
  - TBR 1/2 (Masiga *et al*., 1992)
  - RoTat 1.2 *T. evansi* type A (Claes *et al*., 2004)

Results

Animals	District	GST	TBR 1/2	RoTat 1.2
Camels	Gujranwala	5%	15%	15%
	Lahore	0%	8%	8%
	Kasur	0%	3%	3%
Horses	Gujranwala	0%	0.5%	0.5%
	Lahore	0%	0%	0%
	Kasur	0%	0%	0%

Results

- Horses less infected than camels
- Based on both molecular tests, significantly ($p \leq 0.05$) more *T. evansi* positive camels in Gujranwala (15%) followed by Lahore (8%) and Kasur (3%).
- No significant differences were observed between different breeds, age groups and genders.

Results

- Based on different tests, significantly ($P \leq 0.05$) more *T. evansi* positive camels were recorded from the Province of Sindh (13%) followed by those based in Punjab (5%) and Baluchistan (4%) respectively.

Conclusion and suggestions

- *T. evansi* has a wide distribution in Pakistan encompassing three provinces of the state.
- Carrying out screening in different parts of the country and amongst different hosts to study dynamics of the disease and occurrence of the parasite.

Acknowledgment

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Thanks