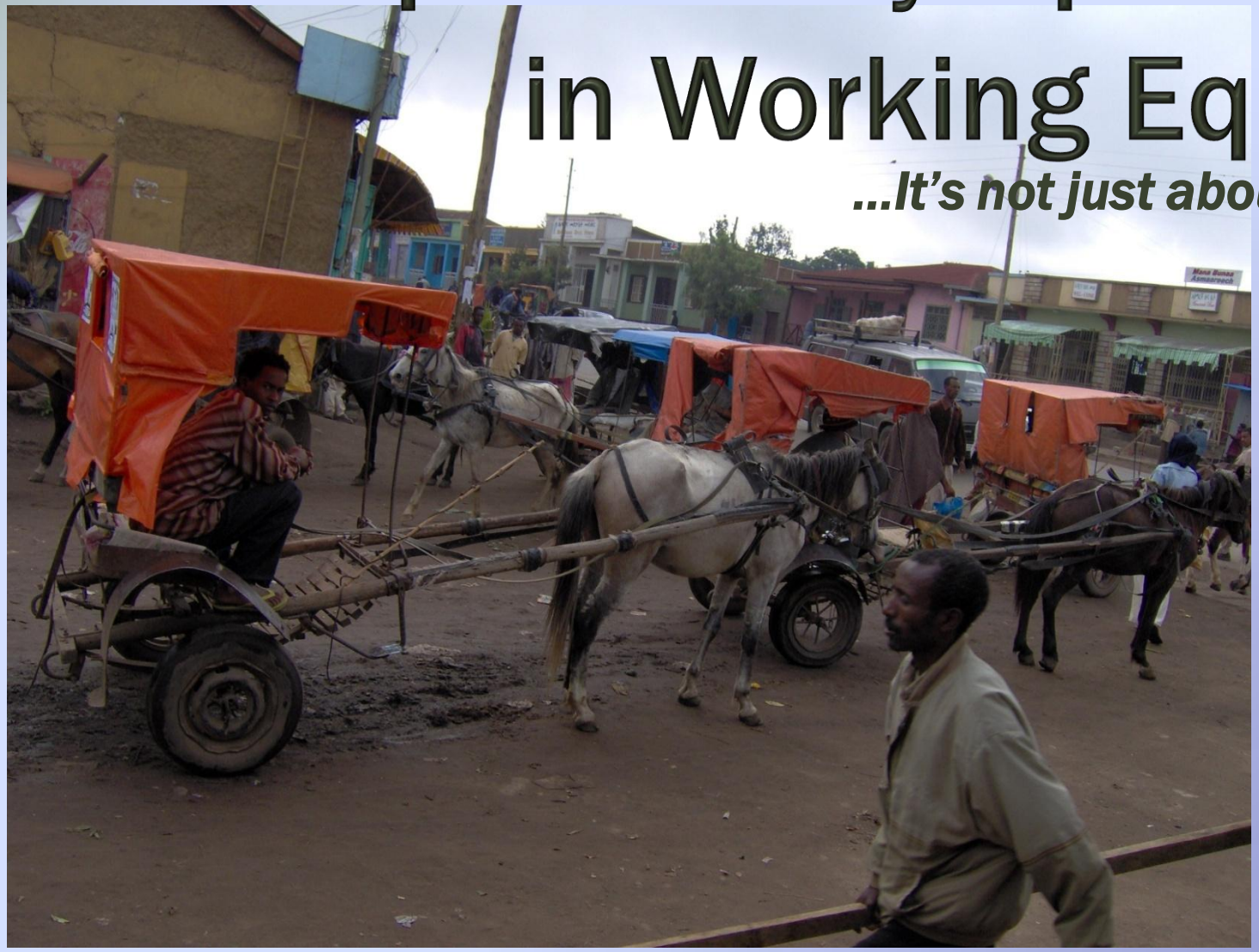
SPANA
Society for the Protection of Animals Abroad

Epizootic Lymphangitis in Working Equines

...It's not just about the horse



UNIVERSITY OF LIVERPOOL

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welfare · science · education
The Horse Trust

Introduction

- Mycotic infection, dimorphic fungus *Histoplasma capsulatum var farciminosum*
- Affects mainly equids, donkeys reported as less susceptible but not immune
- Prevalent in areas of North, East, West Africa, Middle East and Far East
- More recent literature from Ethiopia – endemic
- Prevalence – 18% (0-39% range) Ameni 2006

Disease Presentation and Aetiology

- Chronic pyogranulomatous disease
- 4 forms described: cutaneous, ocular, respiratory, asymptomatic carrier (Al-Ani 1999), may be mixed
- Incubation weeks to months
- Transmission via contact with discharge, mechanical vectors, fomites, inhalation
- Lesions often occur at points of trauma – high risk of skin wounds in working equines
- Differentials: ulcerative lymphangitis, glanders, strangles, sporotrichosis

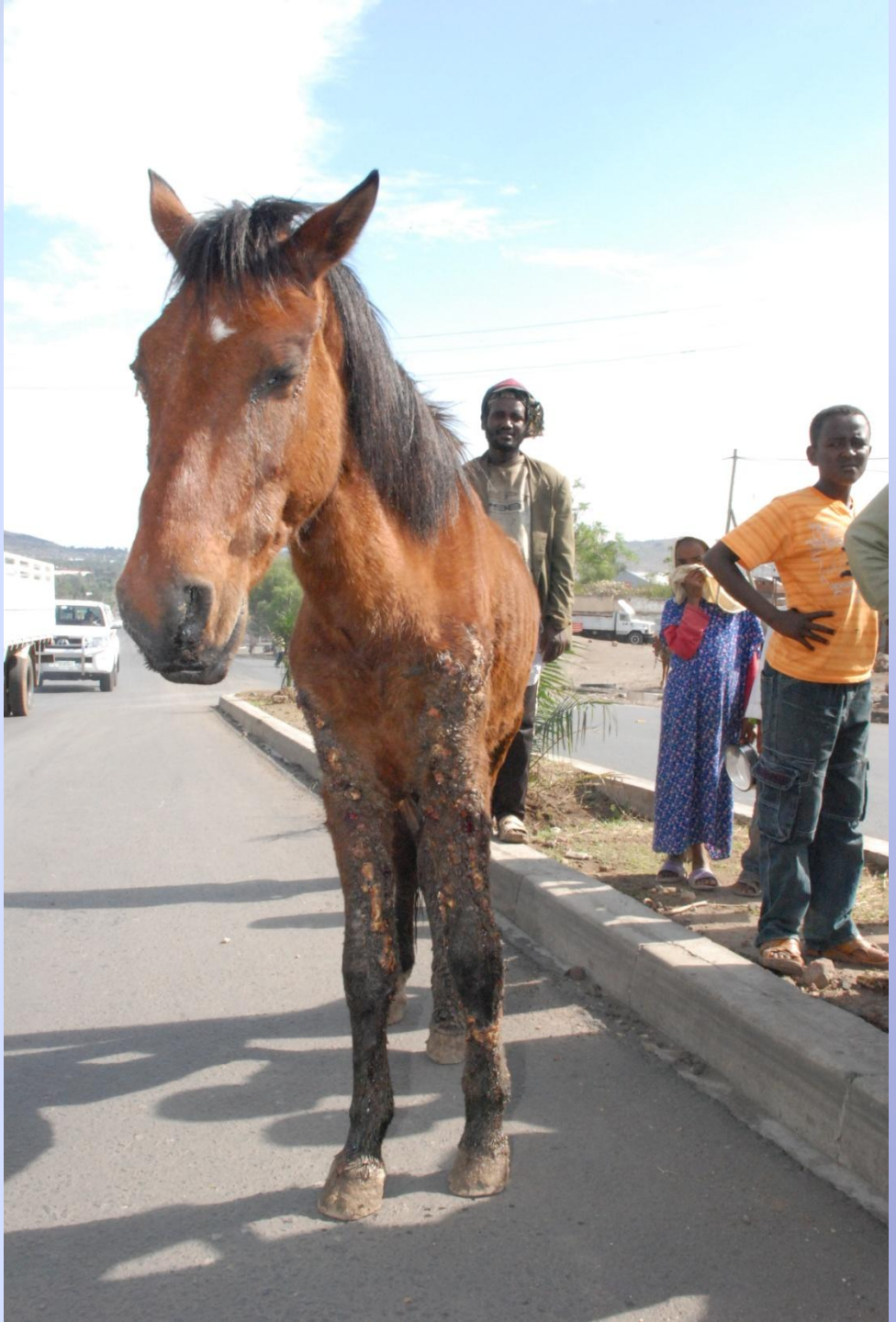
Cutaneous Form

Ocular Form

Courtesy of Keith Powell August/05

Ocular form – affecting upper eyelid and nasolacrimal duct

Respiratory Form



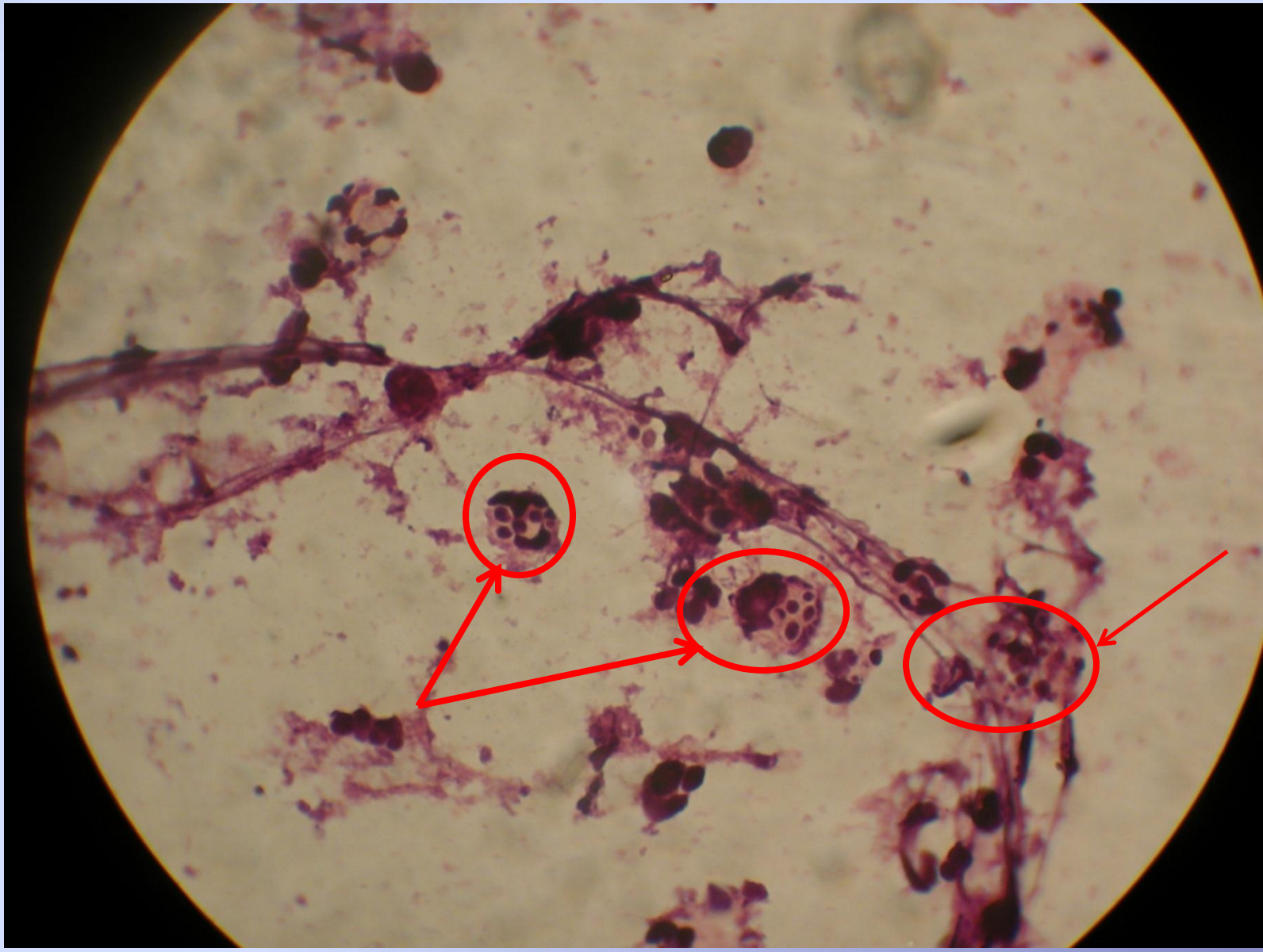
Importance due to:

- Impact on equine health and welfare
- Socio-economic effect

Diagnostics: aspirate from unruptured nodule

Make smear of aspirate, air dry and stain with Giemsa / PAS

Ovoid yeast bodies within macrophages and liberated



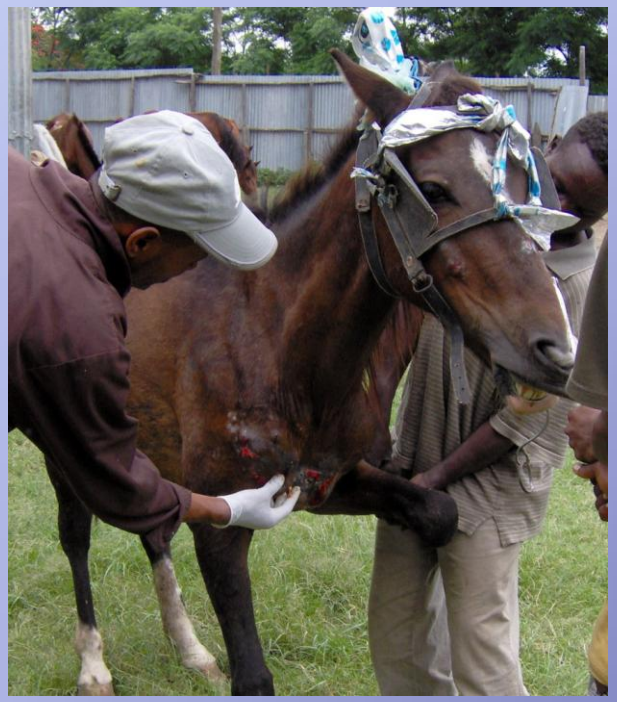
Diagnostics continued…

- Culture
- Stained histological sections
- ‘Histofarcin’ skin test
- ELISA
- Fluorescent antibody-technique
- PCR

Treatment...

- Lance all nodules, infuse with 4% tincture iodine, oral potassium iodide (30g for 200/250 kg horse)
- Repeated infusion and incision of reformed nodules (ideally daily)
- prolonged oral KI same dose for 5days then e.o.d. 3 or 4 weeks
- Early-moderate cases

Getachew 2004



Severe cases:
Euthanasia and carcass disposal

Potential Control options…

- Reduce risk of exposure to organism
- Wound prevention and management
- Exposure to infected animals direct and indirect
- Fly repellent
- Environmental decontamination (?)

Control options...

- Reduce risk of exposure to organism
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- Exposure to infected animals direct and indirect
- Fly repellent
- Environmental decontamination (?)
- Treatment of early cases
- Vaccination...

Effect of Disease…

- Participatory Epidemiology Study – August 2007

<u>Aims</u>

1. explore cart-horse owners experience of disease
2. examine effects of the disease on the horse and the owner

Research Questions

- Is EZL recognised by animal owners, and is this regarded as an important disease locally?
- What factors do animal owners associate with the development of disease?
- What happens to an animal with clinical disease and how does this affect the economic value and use to the owner?
- Are measures taken to reduce disease occurrence? Extending to - what would make an intervention sustainable?


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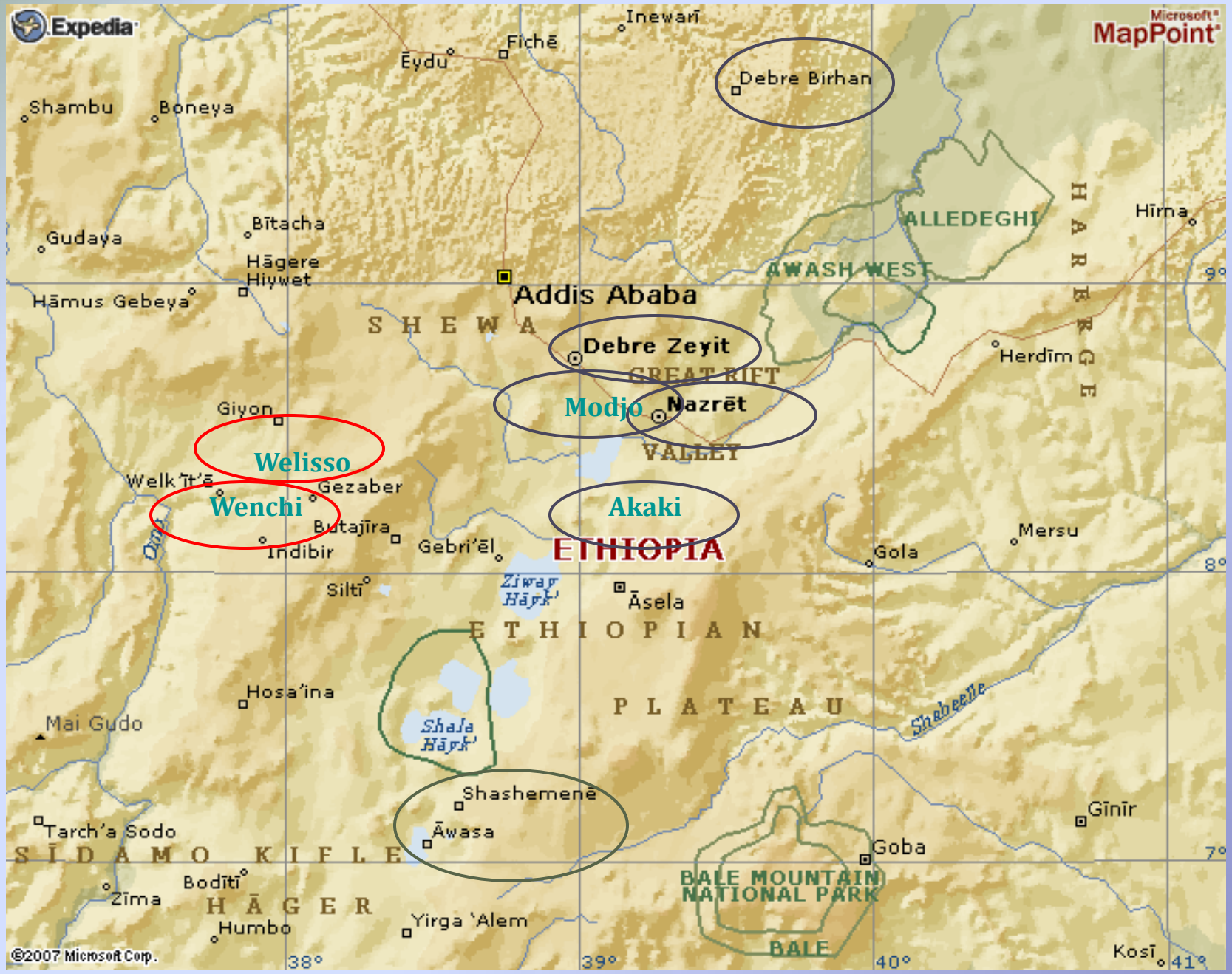
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Outline Method...

- Cart horse owners and drivers
- Focus group semi-structured discussion facilitated by local co-researcher / translator
- Disease ranking, proportional piling, matrices and photos
- 72 groups, including 358 participants 7 SPANA clinic sites, 2 non-clinic sites
- 3-10 participants / group
- ~20minutes / group, notes scribed and audio recording

Summary of Opinions on how a horse becomes infected with EZL

- **Don't know**
- **Contact with infected horses**: (may be grouped into direct and indirect)
  - Abandoned horses
  - Rubbing / mouths
  - Scratching / scratch posts
  - Common grazing
  - Harness materials
  - Whips
  - Stables
  - Rivers
- **Good body condition**
- **Poor body condition**
- **From inside horse**
- **Flies / insects**

-transfer discharge

-Bites

-Increased fly population – linked with season

- **Season / Climate**

-hot climate

-dry

-rainy

- **Hygiene**

-not washing daily

-soap

-sweat (work) causing abrasions

-not cleaning stable after infection

- **Wound**

-Harness inflicted

-Abrasion – sweat

-Fly

Effect of disease on the horse

Disease progression:

- Straight line pattern along white vessels.
- Takes time to develop and depends on the type of EZL (Nidift) and severity of disease.
- Damaged skin/wounds-distribution of wounds
  - swellings which rupture
  - discharge
  - ulcers
  - pungent smell – people unwilling to use
- Irreversible cases, no option forced to reject / abandon(see next slide)
- **Death due to abandonment** and malnutrition

Effect of disease on the horse

Later stages of disease:

- Disturbs horse, aggressive due to pain from harness contacting lesions
- Inappetant
- Stiffness/lameness
- Loss of condition
- Weak and lethargic
- **Reduces working efficiency**

Does EZL (Nidift) affect your income/lifestyle?

- **Loss due to**:

-reject / abandon horse

Reasons :

-pungent / wounded

-Bad for village

-People unwilling to use

-Cannot work

-attracts flies

-reduced work / speed

-replacing horse expensive

- **Effect of loss:**

- Life based on day to day income
- Dependent on cart-taxi business
- Halves income (if owner has 2 horses)
- Reduces consumption and living situation

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For further information see Scantlebury and Reed 'Epizootic Lymphangitis' Chapter in '*Infectious diseases of the horse'* a peer-reviewed text edited by T.S. Mair Published EVJ Ltd. 2009.

Acknowledgements…

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