

Epidemiology: How Equine Influenza (EI) spread in the horse population in NSW

Barbara Moloney BVSc, MVS, MACVSc

Technical Specialist (Disease Surveillance & Risk Management)

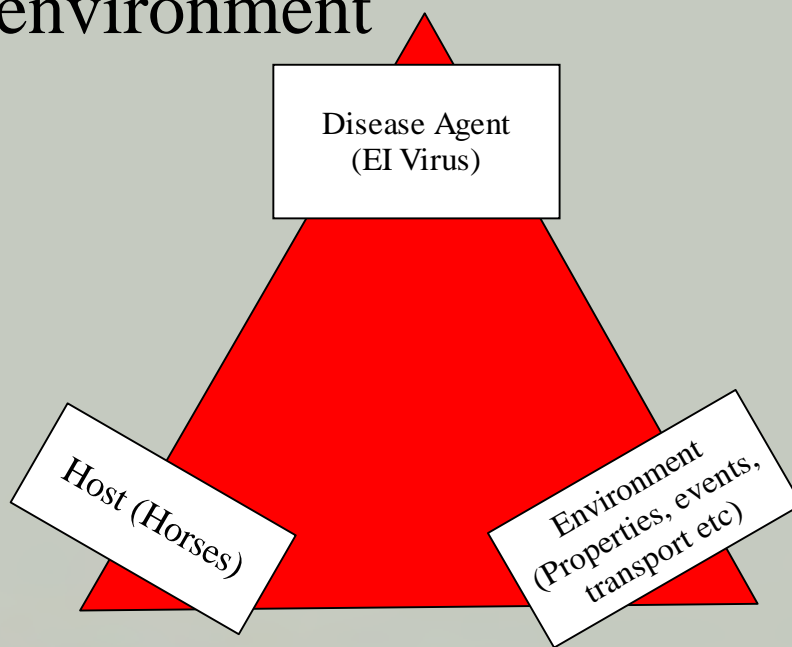
NSW Department of Primary Industries



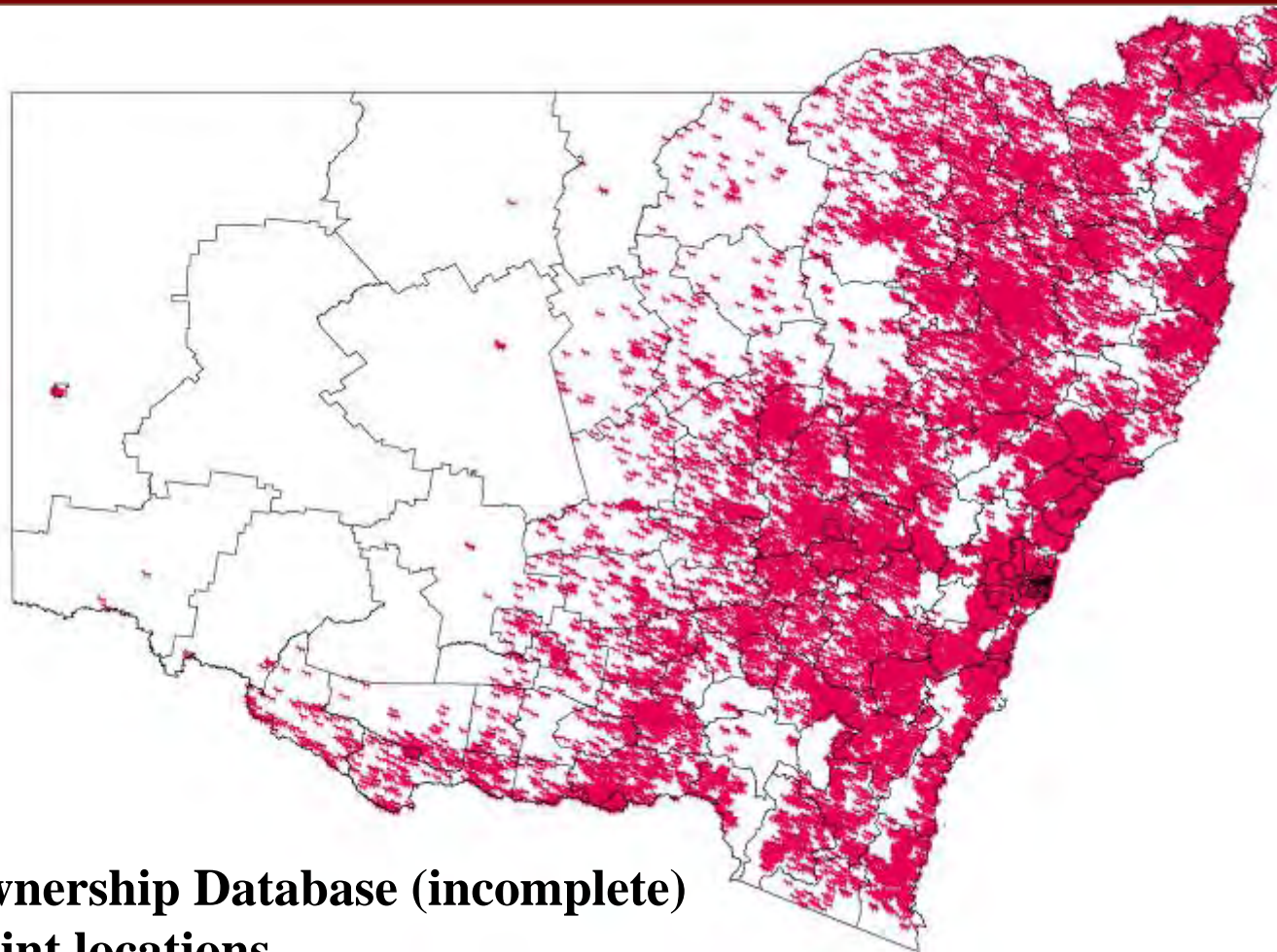
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Epidemiology

- The study of the occurrence of disease in populations and its interactions with the host and environment



Important to know where the populations (horses) are located



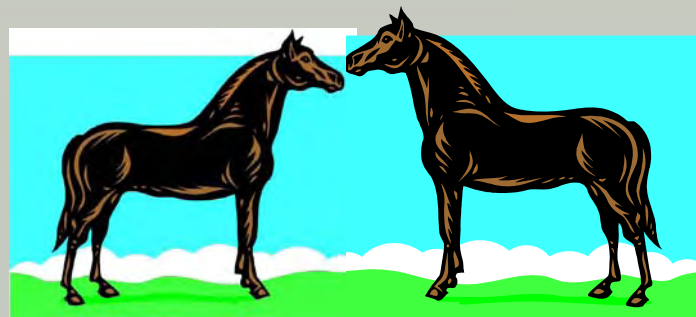
Horse Ownership Database (incomplete)
35,000 point locations



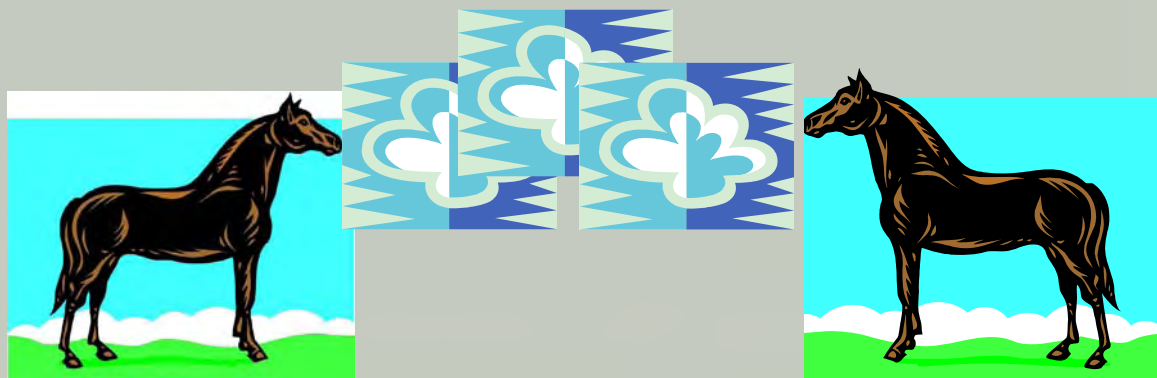
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Ways in which disease (EI) can spread in populations

- 1. Direct contact



- 2. Via contaminated air



3. Fomites

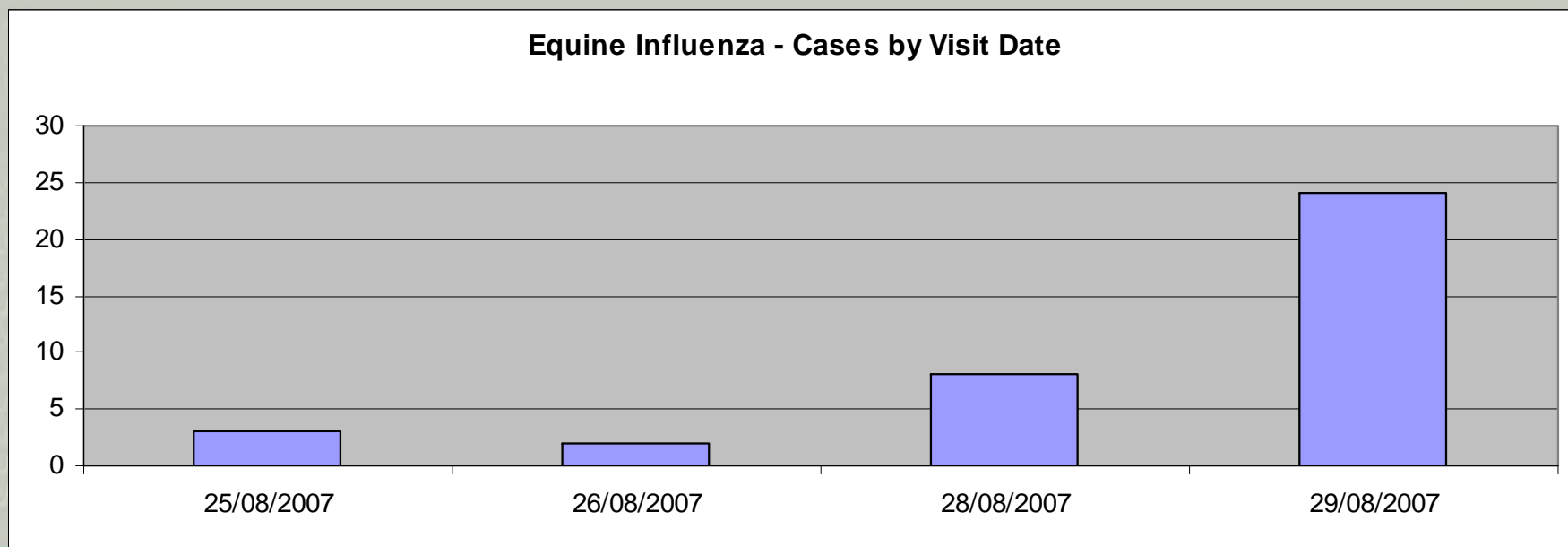
- Inanimate objects on which infectious particles can transfer



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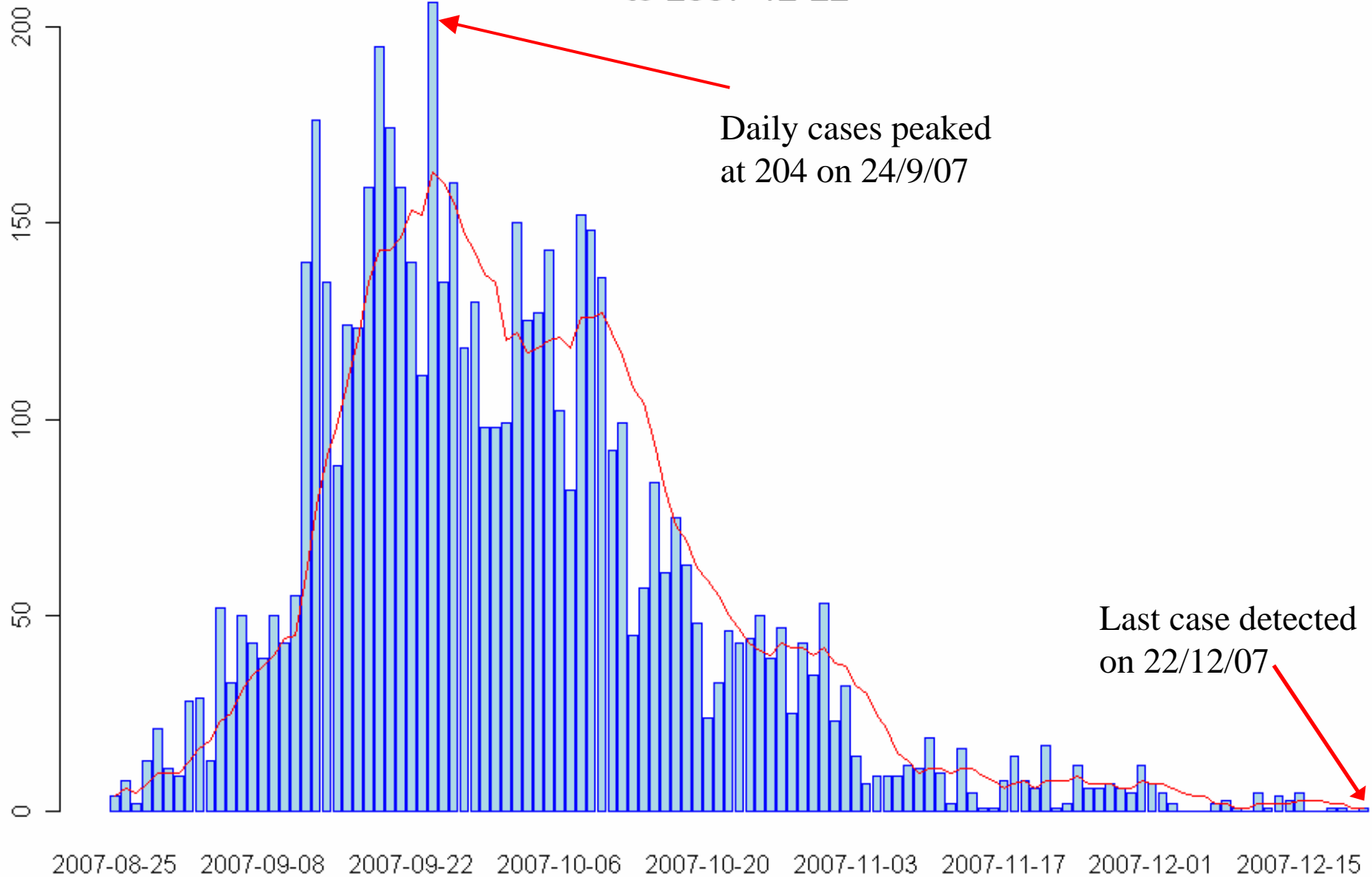
The spread of EI in time

- Epidemic curve early in the outbreak



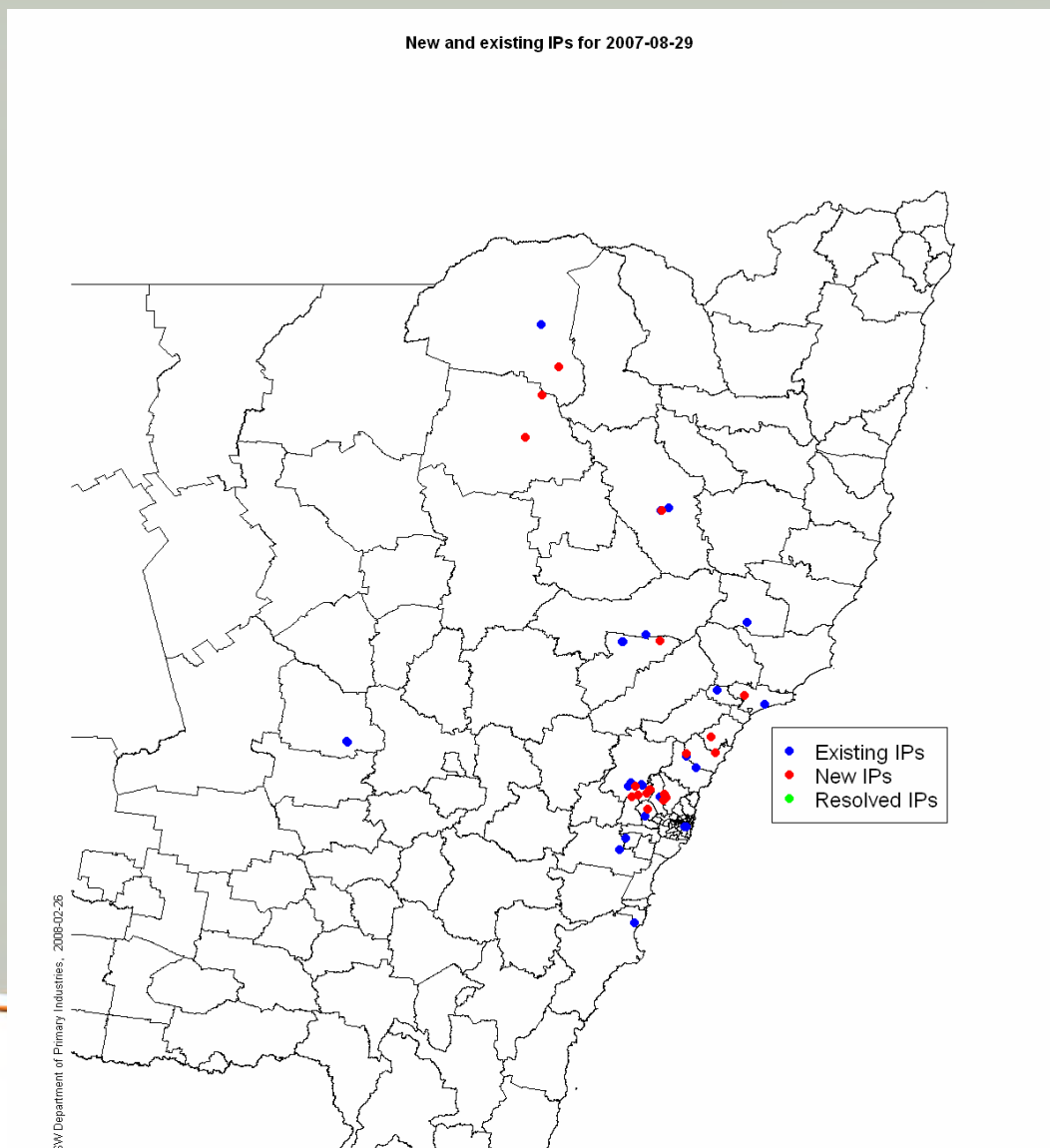
Epidemic curve for NSW

to 2007-12-22



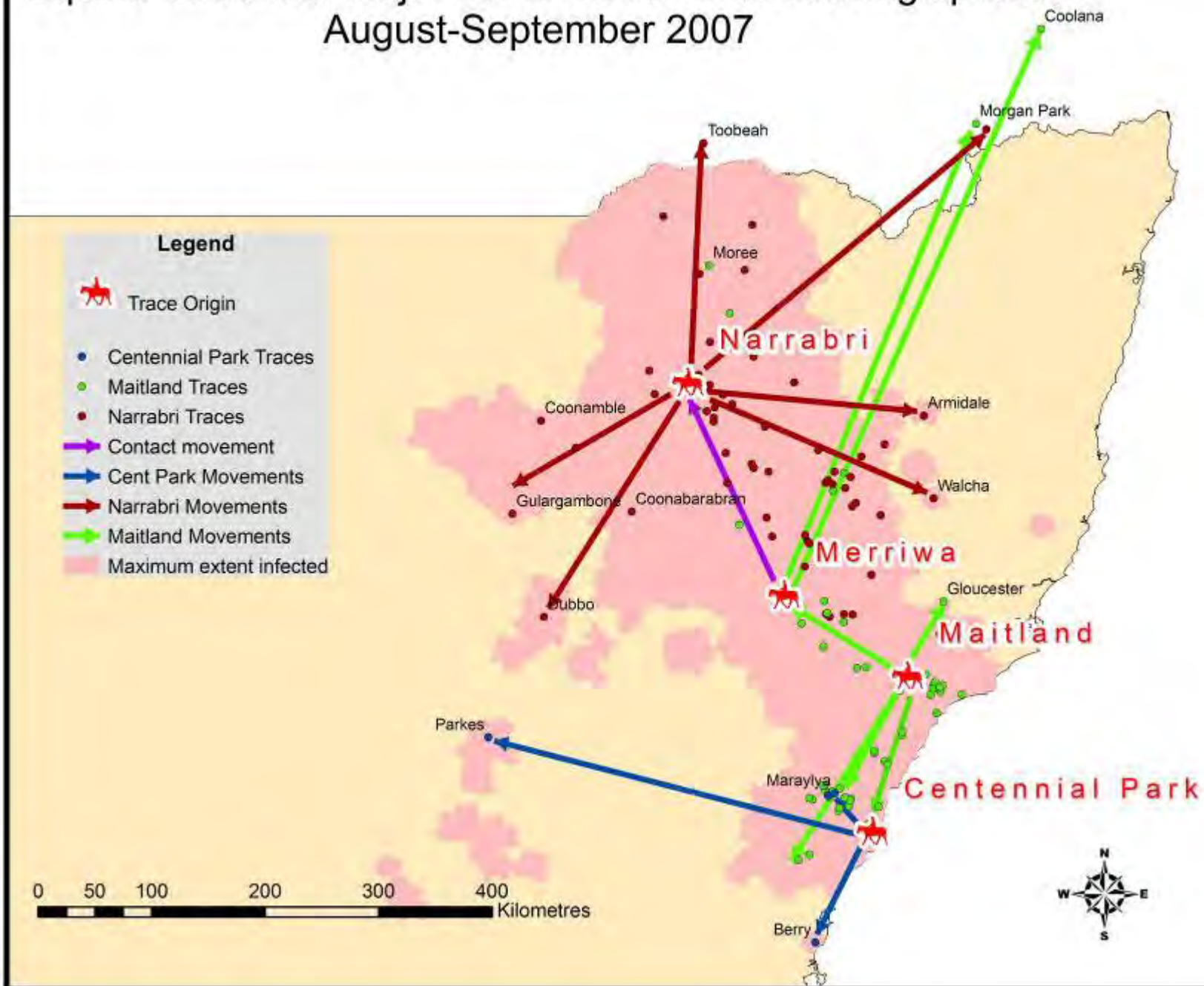
Spread of EI in space

■ Maps – earliest cases

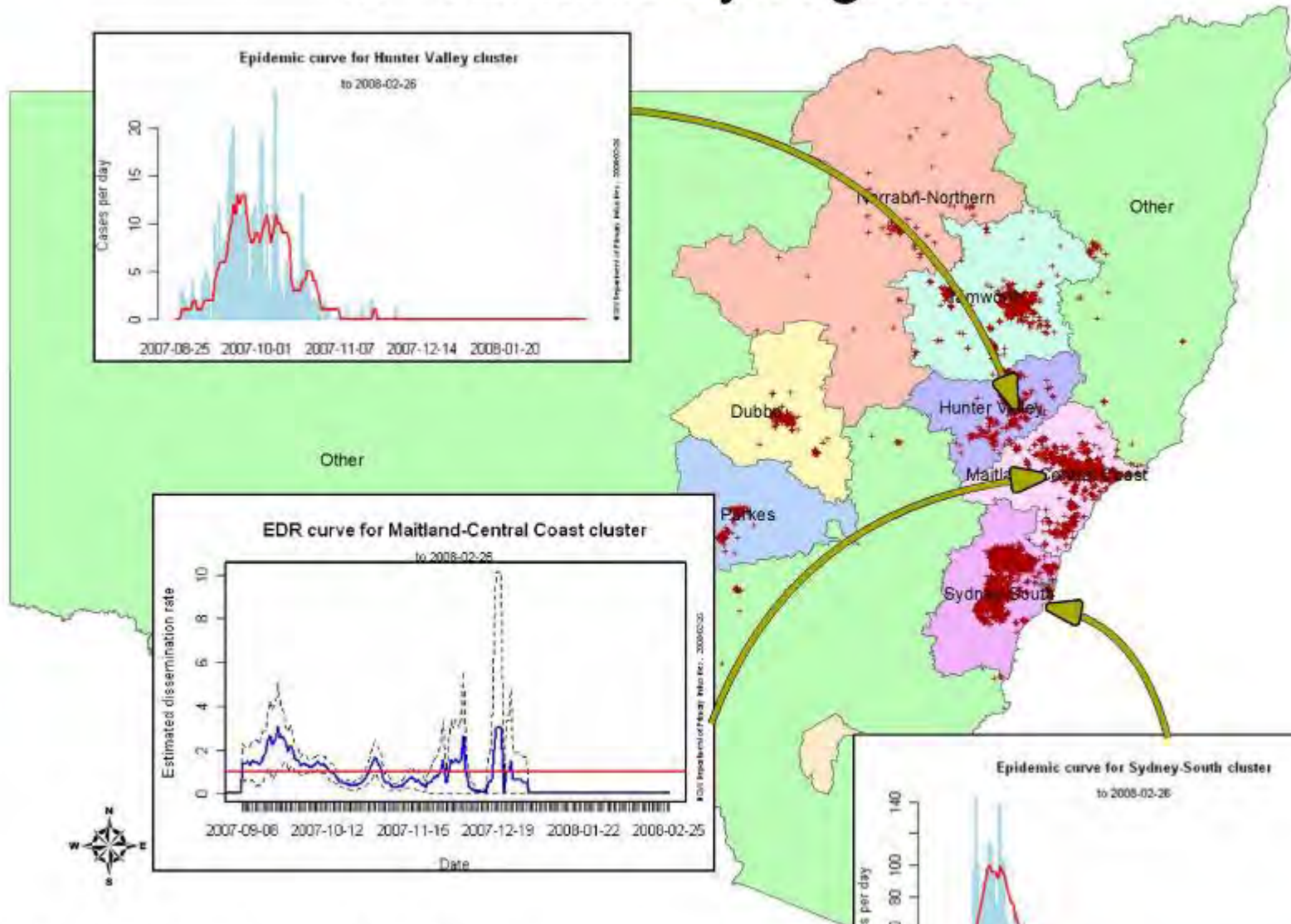
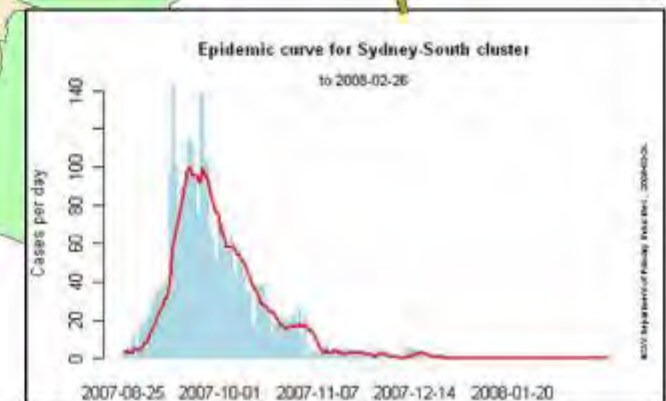
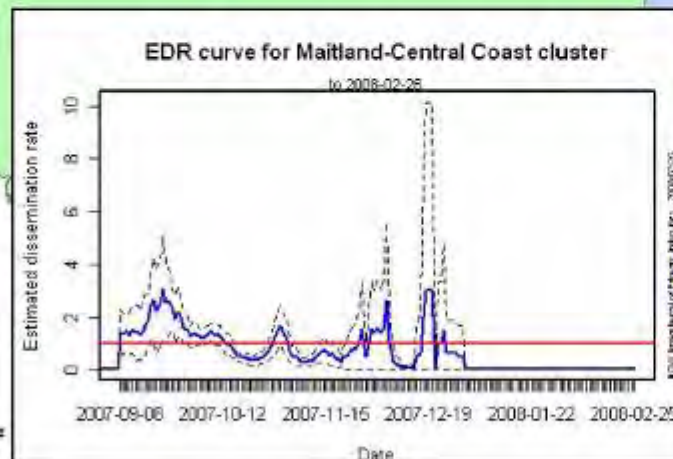
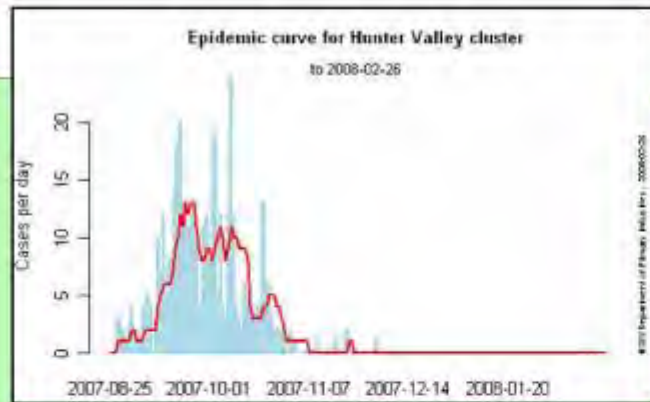


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Equine Influenza: Major horse movements causing spread August-September 2007

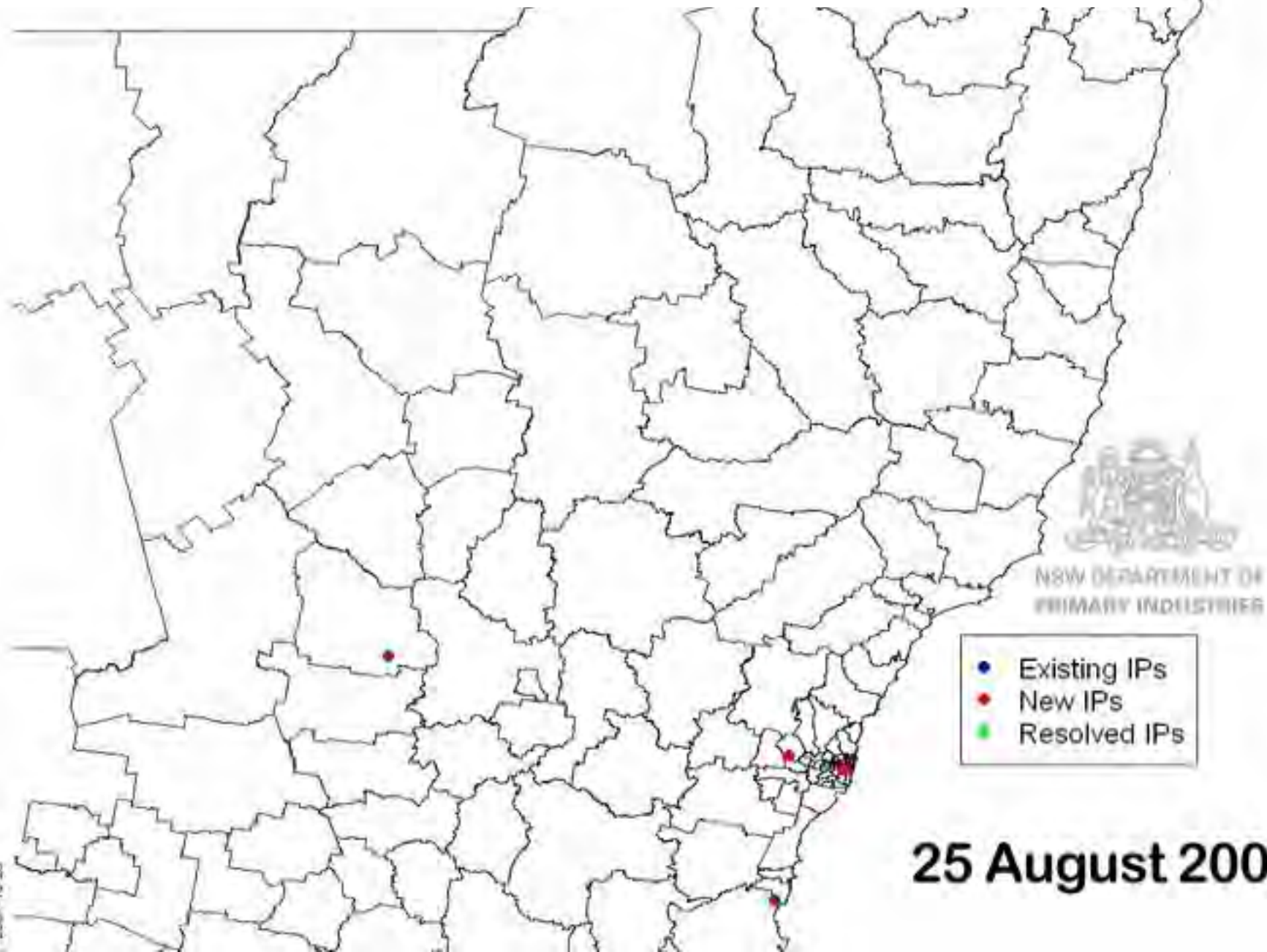


IP clusters by regions



0 50 100 200 300 400 500 Kilometres

EI – the movie: Spread and control of EI in NSW



25 August 2007