Sheep and Goat Pox in Greece (Evros prefecture)

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Sheep and Goat Pox in Greece
(Evros prefecture)

- Background information
- Current events
- Measures in place
- Conclusions
- Acknowledgements


**Background information**

**Last Occurrence of Sheep and Goat Pox in Greece:**

**10/01/2007**

Lesvos Island  (East Aegean Sea)

1 single outbreak in a sheep holding

• Stamping out of the infected holding
• Clinical & Serological survey around the outbreak
• Some additional Serological survey too

No other outbreak detected, measures lifted on **21/02/2007**

Source of the infection : unknown(?)
Background information

Evros prefecture – features & administrative structure

The upper North-Eastern prefecture of the country.

Borders with Bulgaria (North) and Turkey (East).
Derives its name from the Evros river that forms its natural (eastern) frontier with Turkey.

A rural area (2,452 small ruminant holdings with 261,674 animals in total).

1 slaughterhouse, 1 medium sized dairy plant, 3 small creameries, 2 cutting plants (processing mostly pork).

An area that has repeatedly experienced exotic disease incursions in the past like FMD (last occurrence in 2000) Sheep & Goat Pox (last occurrence in 2000, excluding the present outbreaks).

Summertime considered to be the highest risk period for disease incursions particularly when associated with a drop of the Evros river water level (natural barrier).

As of 2011 the area is covered by two local veterinary authorities:

• Dept of Vet. Medicine of Orestias (Northern Municipalities)
• Dept of Vet. Medicine of Evros (Southern municipalities)
Background information (1994-2000)

Previous Occurrence of Sheep and Goat Pox in the Evros prefecture

1988 ⇒ Last SGP epidemic in which vaccination was used, in combination with stamping out (no vaccination since 1988).

1994-2000

1994 ⇒ 2 outbreaks
1995 ⇒ 8 outbreaks
1996 ⇒ 101 outbreaks
1997 ⇒ 53 outbreaks
1998 ⇒ 25 outbreaks
2000 ⇒ 1 outbreak


No other outbreak in the Evros area ever since (until 2013)
Background information (1994-2000)
Historical observations from past SGP epidemics in the Evros area

• Clinical signs observed predominantly in sheep
• Outbreaks tended to be sporadic, often at long distances from one another
• Outbreaks usually occurred during the period between mid-summer to mid-winter
• Outbreaks were usually located close to Evros River (=natural border with Turkey)
• Clusters of many outbreaks within an epidemiologically relevant area (e.g. a village) were not common
• Few outbreaks could span over a relatively long period and sometimes new outbreaks occurred just when the epidemic seemed to have died-out
SGP in EVROS - Current Events

1st outbreak (near Pythion village)

- **12/8/2013** ⇒ Notification, by a sheep farmer, of cutaneous lesions in some of his sheep (~3 km from Evros river & 1 km from **Pythion village**). Visit by an Official Veterinarian (Dept of Vet. Medicine of Orestias, same day), holding placed under official restrictions due to SGP suspicion—restrictions imposed on the entire Northern Evros Area. Activation of the relevant contingency plan.

- **14/8/2013** ⇒ SGP lab confirmation (PCR & AGID at the Dept of Virology of the Athens Center of Veterinary Institutes = NRL). Establishment of protection (3 km) and surveillance (10 km) zones.

- **15/8/2013 (National Holiday!)** ⇒ Preliminary notification (SANCO-Bulgaria-Turkey)

- **16/8/2013** ⇒ stamping out – cleaning / disinfection of the infected holding, online notification [ADNS-WAHIS].

<table>
<thead>
<tr>
<th>Total susceptible animals</th>
<th>130 Sheep</th>
</tr>
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<tbody>
<tr>
<td>Total animals affected</td>
<td>10</td>
</tr>
<tr>
<td>Total animals that died</td>
<td>1</td>
</tr>
<tr>
<td>Distance from Evros River</td>
<td>3 km</td>
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*Sheep and Goat Pox in Greece (Evros) 2013 - SCoFCAH, Brussels 10-11 Sep 2013*
SGP in EVROS - Current Events
2nd outbreak (near the city of Orestias)

- **27/8/2013** ⇒ Notification by a farmer, of cutaneous lesions in some of his sheep (3-4 km from the city of Orestias & ~ 10 km from 1st outbreak). Visit by an Official Veterinarian, holding placed under official restrictions due to SGP suspicion.

- **29/8/2013** ⇒ SGP lab confirmation - Establishment of protection and surveillance zones.

- **30/8/2013** ⇒ stamping out – cleaning / disinfection of the infected holding, online notification [ADNS-WAHIS].

Possible source of infection (working hypothesis): a milk transport truck whose itinerary included the holding of the 1st outbreak (????)

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**Total susceptible animals**: 318 Sheep
35 Goats

**Total animals affected**: 70 sheep

**Total animals that died**: 3

**Distance from Evros River**: 6 km
SGP in EVROS - Current Events
3rd outbreak (near the city of Orestias)

- **02/9/2013** ⇒ Notification, by a sheep farmer, near the city of Orestias, of cutaneous lesions in some of his sheep. Visit by an Official Veterinarian (Dept of Vet. Medicine of Orestias, same day), holding placed under official restrictions due to SGP suspicion.

- **05/9/2013** ⇒ SGP lab confirmation - Establishment of protection and surveillance zones.

- **06/09/2013** ⇒ stamping out – cleaning / disinfection of the infected holding, online notification [ADNS-WAHIS].

Reported as secondary outbreak, yet no clear epidemiological link with the previous outbreaks (could be a primary one ?)

**Total susceptible animals**
- 78 Sheep
- 54 Goats

**Total animals affected**
- 1

**Total animals that died**
- 0

**Distance from Evros River**
- 1.3 km

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In all outbreaks lesions observed were relatively recent

Estimated age of lesions: \( \leq 3-4 \text{ days} \)

Overall morbidity: 13.17\%
Overall mortality: 0.65 \%

**Outbreak no 1, Photo courtesy of Dr. A. Baka**

**Outbreak no 2, Photo courtesy of Dr. C. Dadousis**
01/01/2013 - 06/9/2013

Notification (ADNS system) of **82 SGP outbreaks in Turkey** (in total)

**European Turkey**

- **29 Aug 2013** notification (ADNS system) of **6 SGP outbreaks in European Turkey** (confirmation on 2-26 July, ~25-42 km from the 1st outbreak in Greece)

- **4/9/2013** notification (ADNS system) of **2 more SGP outbreaks in European Turkey** (confirmation on 3-12 June, ~27-72 km from the 1st outbreak in Greece)

- **01/01/2013 - 06/9/2013** notification of **16 SGP outbreaks in the Eur. Turkey in total** (ADNS)
Measures in place

• Northern Evros⇒ since 12/8/2013  exit of live animals, meat, carcasses, manure (of susceptible species) as well as feed /fodder or other material that could potentially transmit SGP is strictly prohibited.

• In protection – surveillance zones measures of Dir. 92/119

• Additional measures :

  ✓ Pre-emptive killing of sheep in two holdings adjoining outbreak no 1 (lab tests returned negative)

  ✓ Prohibition of movements of milk transport trucks in the protection zones (1 dairy plant + 3 creameries)

  ✓ Prohibition of slaughter of animals originating from zones (protection+surveillance) unless this is an emergency slaughter

  ✓ Prohibition of grazing close to Evros river, (entire Evros prefecture)

  ✓ Additional clinical surveillance of small ruminant holdings in villages close to Evros river (entire Evros prefecture)

• Increased biosecurity measures (special directions for milk transport trucks) – avoidance of unnecessary visits in small ruminant holdings

Rest of country : increased awareness
Conclusions

Possible route of introduction of the disease? ⇝ Unclear

Illegal immigration?
Not very likely (number of illegal immigrants greatly reduced over the past months due to increased safeguard measures on the border with Turkey)

Illegal imports of animals – products from Turkey?
Not very likely (animals phenotypically different from native breeds – price of meat substantially higher in Turkey over the past months)

Insect bites?
Not considered to be a common vehicle for SGP, cannot be excluded (difficult to prove too!!)

Wildlife?
As biological vectors: Not very likely (some wild goats present, but on the northern part of Evros, close to the Bulgarian border)
As mechanical vectors: (Mammals-birds?)

Other (non traceable) indirect transfer of the virus (?)
Acknowledgements

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All colleagues of the Dept of Veterinary Medicine of Orestias !!!!
Thanks for your attention !!!