# VectorNet

**ISSUE N.2** | Nov. 2020

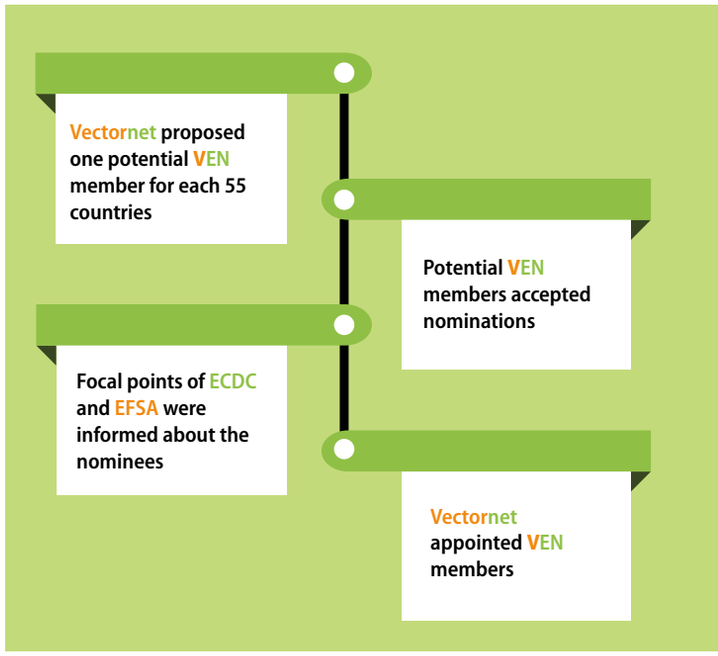
*Welcome to the second VectorNet newsletter. VectorNet is a joint project of the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC), which started in May 2014 and is now in its second iteration (2019–2023). In this newsletter we update about our current activities and progress. VectorNet aims to publish two newsletters per year.*

## SHAPING THE VECTORNET ENTOMOLOGICAL NETWORK

The *VectorNet* Entomological Network (**VEN**) is now established and it is currently composed of 51 countries: EU (27), European Economic Union (EEU) (3), Enlargement (7) European Neighborhood Policy partner country (ENP) (14). All members are entomologist or experts in entomology with an expertise in at least one of the four vector groups: mosquitoes, ticks, sand flies, or culicoides. Few other countries were invited to join.

The role of the **VEN** members involves:

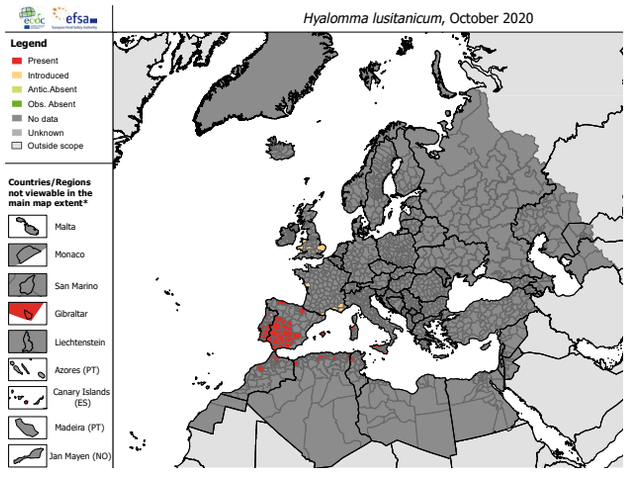
- Providing entomological expertise to EFSA and ECDC to assist in their risk assessment activities.
- Acting as contact point for entomological matters in their country.
- Ensuring the provision of vector surveillance data to maintain and continue development of a pan-European database on vector distribution, abundance and seasonality.
- Facilitating communication between national health authorities and local entomologists in their country.




## MAPPING VECTOR SURVEILLANCE ACTIVITIES

Through the **VEN**, *VectorNet* collected data on the recent history (2015–2019) and location (NUTS3/GAUL2) of vector surveillance activities for each of four vector groups in the EU/EEA, enlargement and EU neighborhood policy countries. The surveillance activities were then mapped in a similar way as was done for the distribution of vectors. These surveillance maps help to confirm where vector surveillance is/was carried out and are particularly useful for identifying where vectors have not been recorded, despite surveillance efforts i.e. to improve our definition of absence.

These maps support ECDC and EFSA's risk assessment and management of vector-borne diseases. The deadline for data provision for the first round was September 2020, but data submitted after that date will be retained and used in the future.




Example of the vector distribution map. Photo credit: VectorNet

## INSIGHTS INTO GOVERNANCE OF VECTOR SURVEILLANCE AND CONTROL

Through a questionnaire sent to the **VEN**, *VectorNet* is collecting data on the governance of vector surveillance and control of each of four vector groups in the EU/EEA, enlargement and European Neighbourhood Policy partner countries. With the support of the national focal points of ECDC and EFSA, the **VEN** members provide information on how vector surveillance and control is organized in their country and what legal frameworks exist to facilitate these efforts. Through this questionnaire, *VectorNet* aims to describe the organization of vector surveillance and control in the EU/EEA, enlargement and European Neighbourhood Policy partner countries and to highlight commonalities and differences. The deadline for replying to the questionnaire is 12 November 2020.

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## RAPID SURVEY ON TICK DENSITY INCREASES

After an increase in tick-borne encephalitis (TBE) was reported in Germany in 2020, possibly linked to increased tick densities, *VectorNet* held a rapid survey among its network on longitudinal observations on densities of the castor bean tick (*Ixodes ricinus*), the main vector of Lyme borreliosis and TBE. Overall, there was no evidence of European-wide increases in tick densities. While tick densities may have increased in some areas, tick density is only one risk factor of tick-borne diseases. Other risk factors, such as human exposure to ticks, may have changed in 2020 compared to previous years.

*Ixodes ricinus*. Photo credit: VectorNet

## KEY VECTOR BORNE DISEASE ACTIVITY IN EUROPE, VECTOR SEASON 2020

**West Nile virus infection (WNV)**: In 2020, to date, a total of 315 human WNV infections among humans (including 36 deaths) have been reported through TESSY by Greece, Spain, Italy, Germany, Romania, Hungary, Bulgaria and for the first time in the Netherlands. For details see

**Dengue (DEN)**: Despite the COVID19-related decrease in international travel in 2020, 7 autochthonous transmission events of DEN virus were reported in the EU/EEA in 2020: 1 event in Italy (10 cases) and 6 events in France (12 cases).

**Malaria:** There have been two events of "airport malaria" involving three people in France and Belgium this year.

**African swine fever (ASF)**: Due to the expanding geographic distribution of ASF in Europe in recent years, EFSA began a major campaign to raise awareness and help halt the spread of African swine fever. Although ASF is considered an (opportunistic) vector borne disease, the role of vectors in the epidemiology in Europe is unclear.

Mechanical vectors biting flies (*Haematopota sp. and Sarcophaga sp.*) feeding on a horse. Photo credit: A. Mihalca

## TRAINING ACTIVITIES

Due to the COVID-pandemic, *VectorNet*'s face-to-face training on the basics of entomology for public health and veterinary health professionals has been postponed to 2021.

A live webinar on **Mechanical transmission of pathogens by vectors: epidemiological implications and gaps** was presented by A. Mihalca and M. Braks on 28 September 2020. A recording is available at the ECDC Virtual Academy

## OUTLOOK

- 11 December 2020 Live Webinar: Surveillance of vectors on Ports of Entry by J. Medlock, W. Van Bortel and A. Stroo, organized by A. Mihalca. Sign up now at: https://eva.ecdc.europa.eu/
- 2020/2021 Publication of a fact sheet for experts on fleas by A. Mihalca
- March 2021: Next newsletter

## RECENTLY PUBLISHED

- Fact sheet for experts: *Culex pipiens* (June 15, 2020) by F. Schaffner.
- Fact sheet for experts: Phlebotomine sand flies (June 15, 2020) by E. Berriatúa
- Technical report: Vector control practices and strategies against West Nile virus. A. Chaskopoulou, M. Braks and W. van Bortel
- VectorNet Data Series 3: *Culicoides* Abundance Distribution Models for Europe and Surrounding Regionsby T. Balenghien, 46 Authors & W. Wint (16 September 2020) Open Health Data, 7(1), p.2. DOI http://doi.org/10.5334/ohd.33
- New and updated vector distribution maps November 2020:

To find out more about VectorNet please subscribe https://ec.europa.eu/eusurvey/runner/VectorNet_Community_2020

ecdc EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

efsa European Food Safety Authority