

Epidemiological situation of human trichinellosis in Bulgaria for the period 2013-2017

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Introduction

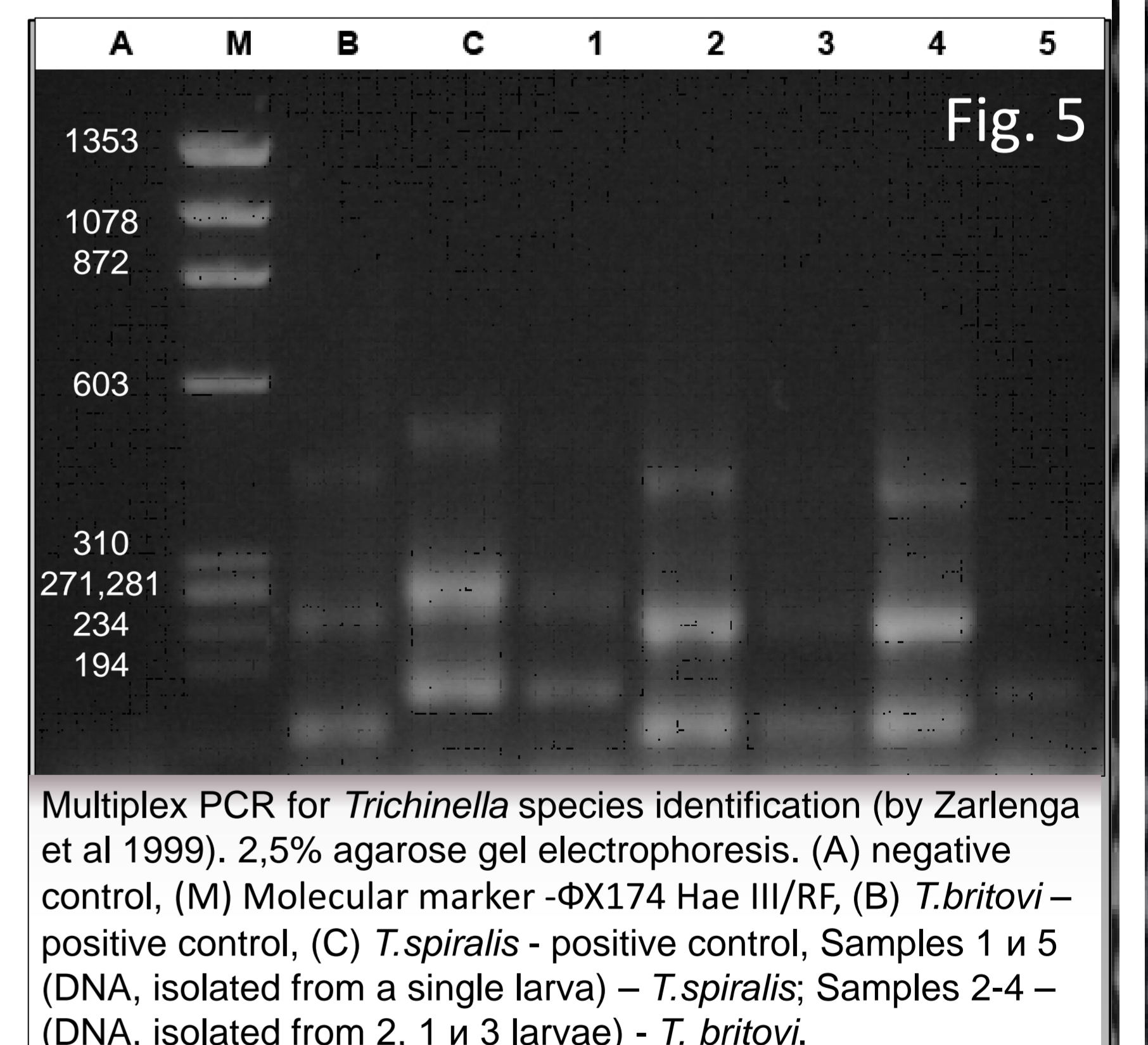
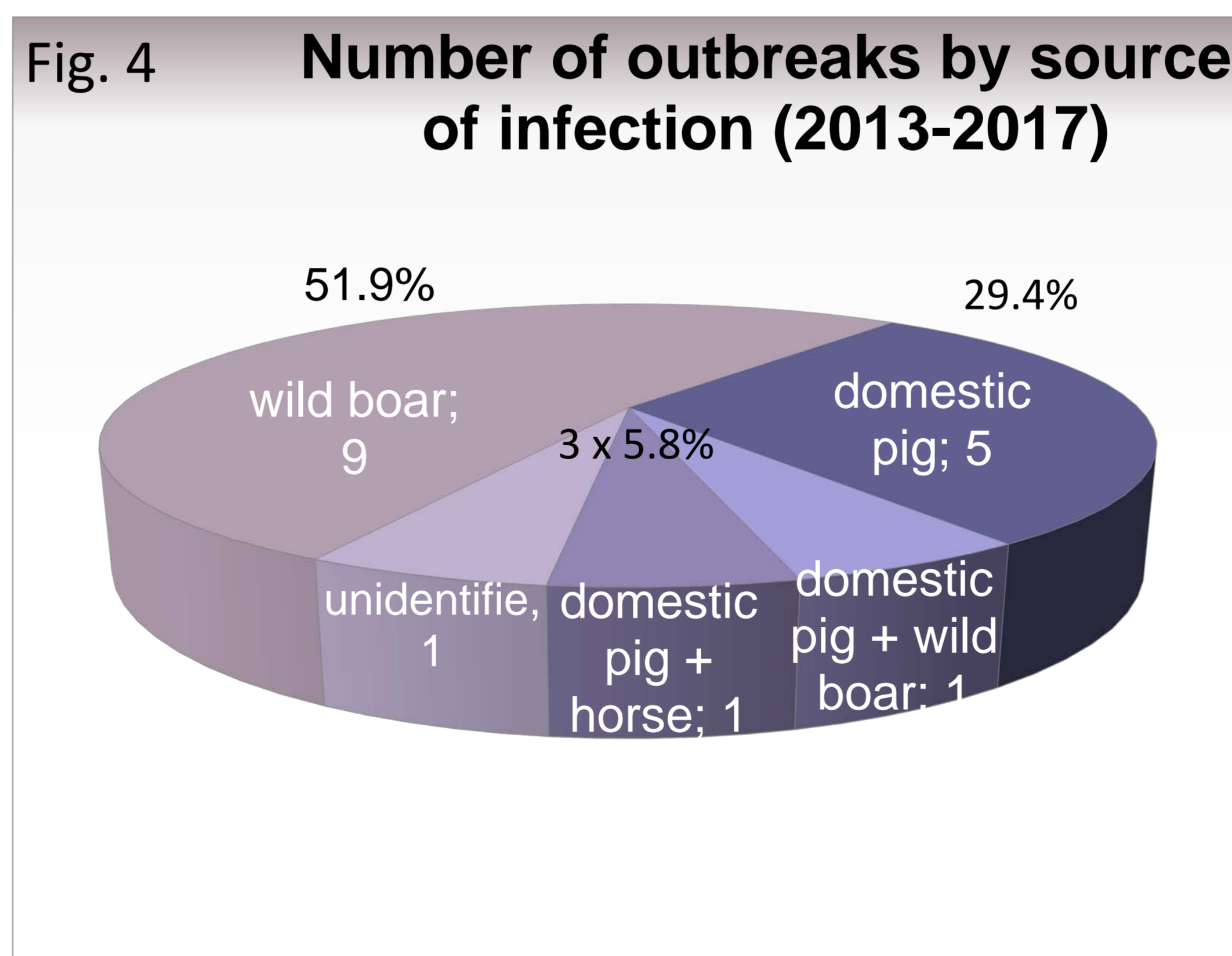
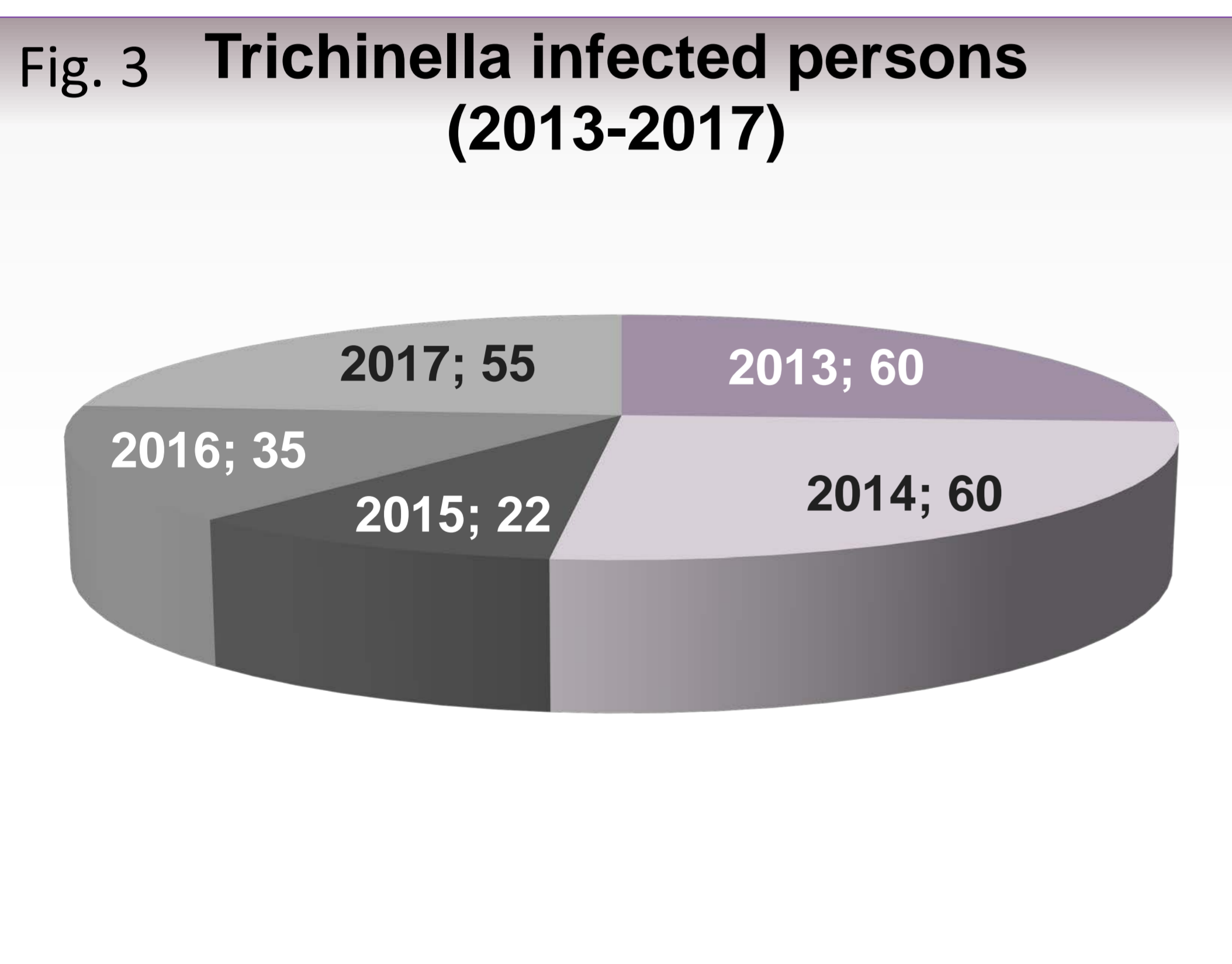
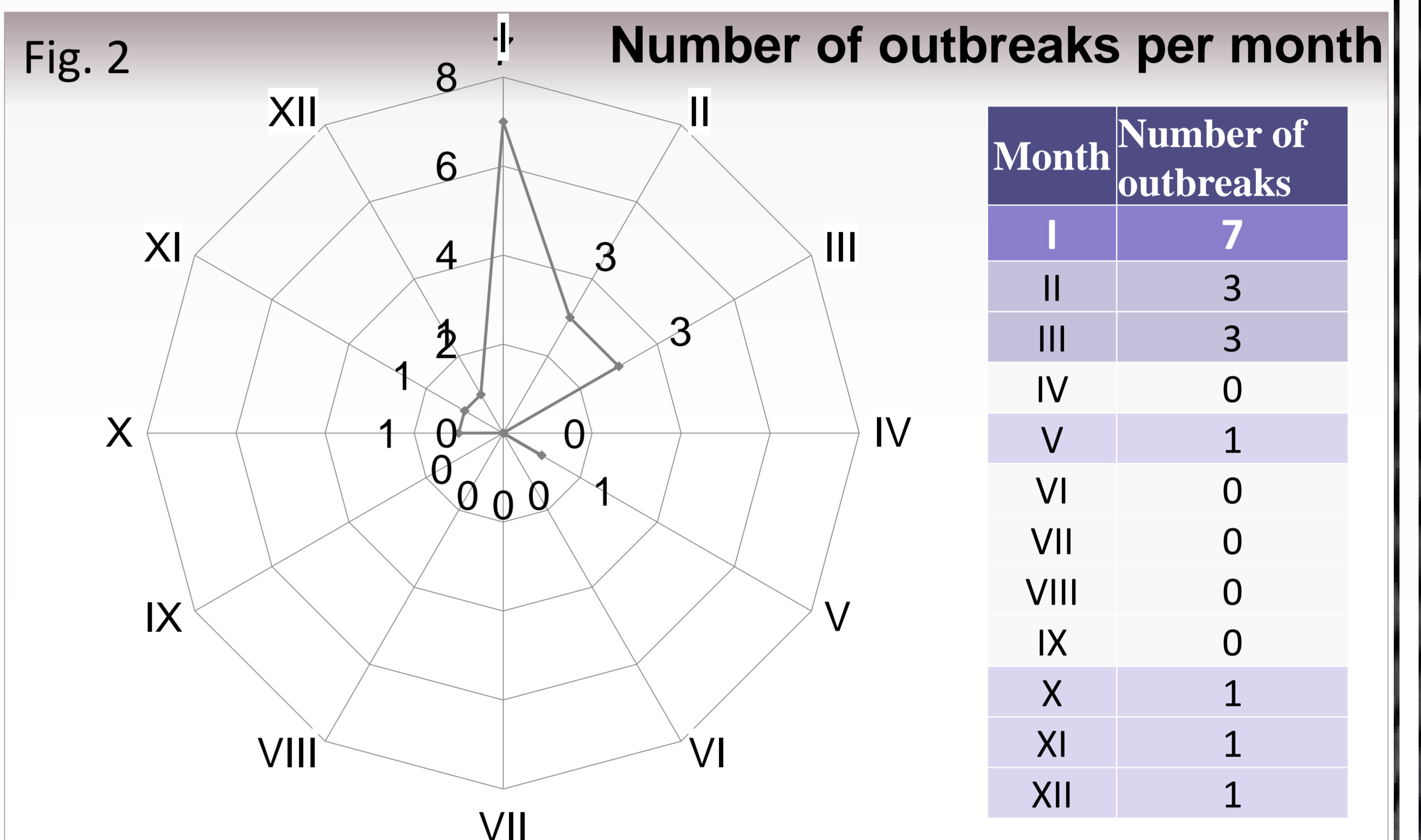
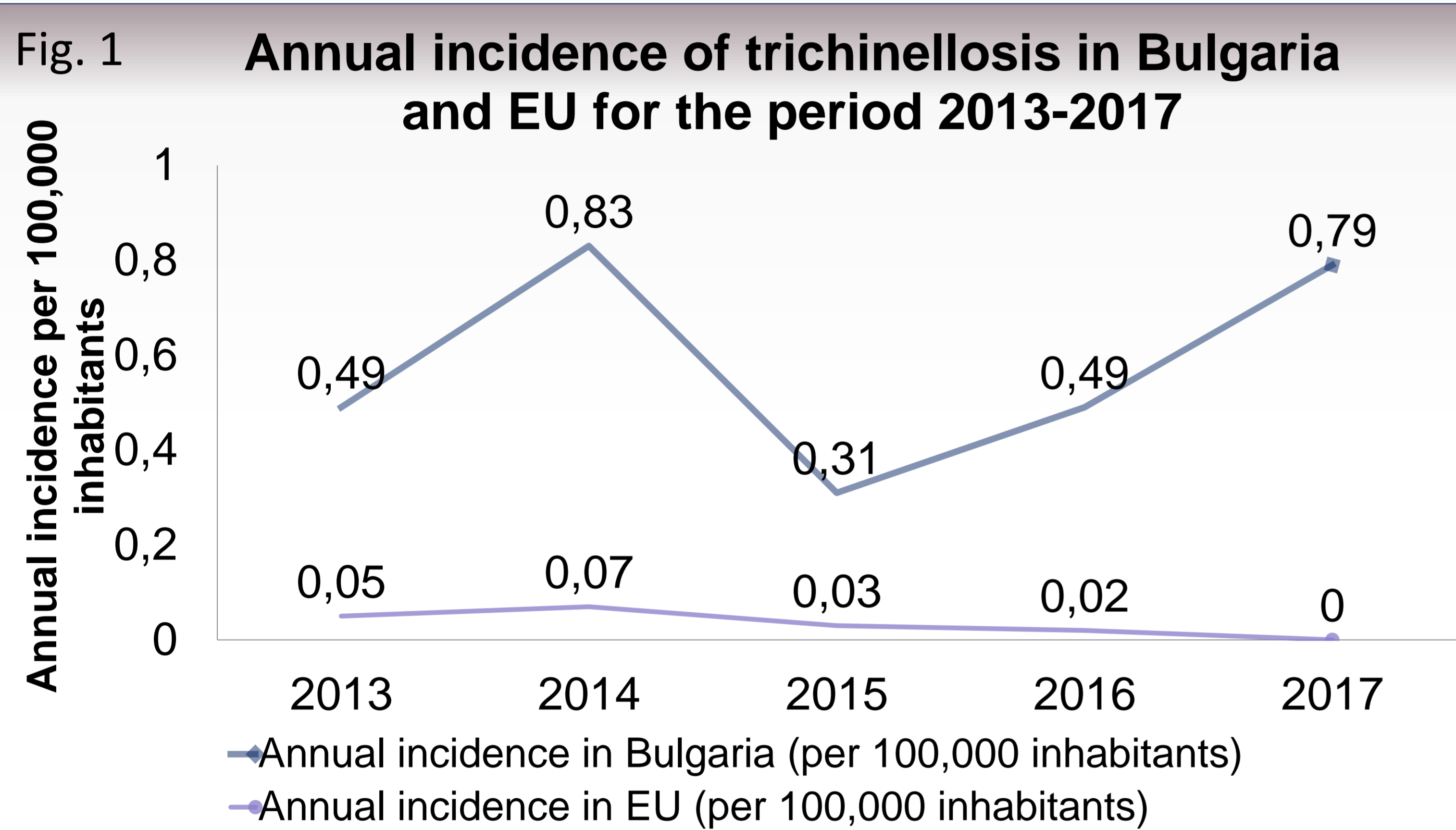
Human trichinellosis is an important food-borne zoonosis in Bulgaria and poses a serious threat to public health. Outbreaks and sporadic cases of trichinellosis are recorded each year in the country. Epidemiological data based on standard protocols for epidemiological surveillance and control of human trichinellosis for each region in the country were collected and analysed at the National Centre of Infectious and Parasitic Diseases, NRL for Diagnosis of Parasitic Diseases.

Aim: to analyze the official data of the NCIPD on the Surveillance and Control of Trichinellosis among Bulgarian people for the period 2013-2017 and to determine the social and medical significance of the disease.

Materials and methods

- Data from the epidemiological forms of the trichinellosis cases registered during 2013-2017 were used.
- Annual analyzes of parasitic diseases in the Republic of Bulgaria, prepared by the Department of Parasitology and Tropical Medicine at NCIPD, have been used.
- Data from the European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks for the period 2013-2017.
- Meat/meat products suspected for harbouring *Trichinella* larvae – for larvae isolation.
- PCR for *Trichinella* species identification (Zarlenga et al 1999).

Results



Conclusion

Trichinellosis remains a disease of concern for medical doctors, veterinarians and public health authorities in Bulgaria. The main source of human infection in Bulgaria is wild boar. Two *Trichinella* species (*T. britovi* and *T. spiralis*) were identified in the trichinellosis outbreaks in the five year period 2013-2017. Control for *Trichinella* in meat in Bulgaria is carried out by the Bulgarian Food Safety Agency (BFSA) and its subdivisions across 28 regions of the country. Consumption of inadequately heat-treated pig or wild boar meat was indicated as the main cause of *Trichinella* infection. Therefore, it is important to continue educating hunters and other people about the risk of acquiring *Trichinella* infection by eating undercooked (game) meat/meat products.

References

- EFSA and ECDC, 2014. The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks in 2013. EFSA Journal 2015;13(1):3991.
- EFSA and ECDC, 2015. EFSA Journal 2015;13(12):4329,190 pp.
- EFSA and ECDC, 2016. EFSA Journal 2016;14(12):4634, 231 pp.
- EFSA and ECDC, 2017. EFSA Journal 2017;15(12):5077, 228 pp.
- Ministry of Health. Ordinance no 5/06.04.2006 on the diagnosis, prevention and control of local parasitic diseases. State Gazette 40, 83-90 (in Bulgarian)
- Ministry of Health. Ordinance no 21/08.07.2011 for the registration, notification and reporting of communicable diseases. State Gazette 52, 29-61.
- Zarlenga DSM, Chute B, Martin A, Kapel CMO (1999) A multiplex PCR for unequivocal differentiation of all encapsulated and non-encapsulated genotypes of Trichinella. Int J Parasitol 29:1859-67
- Rainova, I., Kaftandjiev, I., Harizanov, R. et al. J Public Health (2016) 24: 291. <https://doi.org/10.1007/s10389-016-0724-9>