

## Review PCI in Zoology

First detection of herpesvirus and mycoplasma in free-ranging Hermann's tortoises (*Testudo hermanni*), and in potential pet vectors (Ballouard J-M et al.)

Line 2 and 231: *Mycoplasma* has already been detected in free-ranging Hermann's tortoises:

- 11.8% (11/93) were positive in ELISA [ Untersuchungen zum Vorkommen von Mykoplasmen und Herpesviren bei freilebenden und in Gefangenschaft gehaltenen Mediterranen Landschildkröten ( *Testudo hermanni* , *Testudo graeca graeca* und *Testudo graeca iberica* ) in Frankreich und Marokko – PhD thesis 2003 K. Mathes - Klinik für Vögel, Reptilien, Amphibien und Fische - Justus-Liebig-Universität Giessen].
- 1 animal was positive in *Mycoplasma* PCR (see reference Lecis et al. 2011 on line 417).

Line 35-36: see comment of line 210-221 on the percentages

Line 41: insert "and" between "high" and "should"

Line 56-59: reference DiGeronimo et al. 2019 does not corroborate your statement that *Corua bourreti* is impacted by URTD, as this reference states "The clinical significance of mycoplasmosis in *Corua bourreti* is unknown. Although all the animals examined exhibited nonspecific signs of illness, such as anorexia and poor body condition, none exhibited signs usually associated with clinical mycoplasmosis in other chelonian species, such as blepharitis, conjunctivitis, palpebral edema, or mucopurulent oculo- nasal discharge."

Line 73-75: the reference of Spielman et al. 2004 does not mention anywhere "phenotypic diversity" and "demographic resistances to diseases".

Line 108-110: the reference of Mathes et al. 2001 does not say anything about mortality.

Line 133: replace "pet" with "captive (pet)"

Line 139: rephrase "and vagrant tortoises (wild exotic pet)" into "and vagrant (wild pet) tortoises"

Line 189-191: please clarify which test you mean with "This test". Do you mean the combination of PCR and SN ? The cited references of Origgi et al. 2001 and Origgi 2012 do not state that PCR has a high sensitivity and specificity.

Line 210-221:

- It is not clear how all these percentages were calculated. Please clarify by giving the number of the numerator and the denominator of the fraction.
- Table 2 is confusing: most individuals were tested for both pathogens TeHV+Myc (421/572), but only 400/572 for TeHV ?

Line 215: the number 2.9 % does not appear in table 4

Line 222:  $23/42 = 56.1\%$  females and  $18/41 = 43.9\%$  males

Line 224-225: 28 individuals with clinical symptoms of URTD:  $4 + 8 + 14$  ?

Line 234-236: what are the real *Mycoplasma* infection figures of captives and vagrants and why are these interpreted as high ? (see also comment on line 278).

Line 239-240: please clarify these percentages

Line 245-247: the cited reference of Kolesnik et al. 2017 states that herpesvirus was detected in 17% of the animals, but these authors use the reference of Martel et al. 2009 (Reintroduction of clinically healthy tortoises: the herpesvirus Trojan horse. *J Wildl Dis* 2009;45:218–220) which revealed 16.3 % detection by PCR. I suggest to use the Martel reference instead of Kolesnik. Also: insert “by PCR” between “detected” and “in”; replace “16 %” with “16.3%”.

Line 248: insert “by PCR” between “tested” and “more”; replace “more than 1,000” with “1,015”

Line 250: replace “more than 40 %” with “42.1 %” and “8 %” with “8.0 %”

Line 251: replace “viruses (notably herpesvirus)” with “herpesviruses”

Line 253: insert “(SN test)” between “seroprevalences” and “were”

Line 254-255: replace “and ~5% for two other serotypes (X and reovirus)” with “5.2 % for picorna-like ‘X’ virus and 4.9 % for reovirus”

Line 255: replace “Similar results were” with “A similar PCR result of 36.7 % was”

Line 256: I suggest to remove the reference of Soares et al. 2004, as their PCR result was 15.8 % and this is in my opinion not similar to 42.1 % reported by Kolesnik et al 2017.

Line 258: the reference of Marschang et al. 2009 is not in the list of references

Line 258-259: the reference of Hidalgo-Vila et al. 2020 does not say anything about individuals intercepted during illegal trade, as they used established populations in ponds for their study. They indeed found a high prevalence of 35/44 animals with a wide range of pathogens, but only 5/44 animals with *Mycoplasma* and 5/44 with herpesvirus.

Line 261-263: the reference of Mathes et al. 2001 does not say that the free-ranging animals were negative for herpesvirus

Line 275: insert “believed to be” between “is” and “horizontal”

Line 278: Kolesnik et al. 2017 state a prevalence of 42.1 % *Mycoplasma* and 8.0 % herpesviruses: do you refer to this as a very high prevalence of infection for both *Mycoplasma* and herpesvirus ? (see also comment for lines 234-236)

Line 317: replace “HeHV” with “TeHV”

Line 318: insert “sperm” between “feces,” and “and”; replace “are” with “can be”

Line 522 and 532: change “Captive” to “Captive (pet)”