Primers and PCR programs used for amplification of the four DNA fragments sequenced in the study.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| DNA fragment | Primer name | Primer direction | Primer sequence (5’–3’) | Primer source | PCR programme |
| COI | LCO1490\_JJ | forward | CHACWAAYCATAAAGATATYGG | Astrin & Stüben 2008 | Michalczyk *et al.* 2012 |
| HCO2198\_JJ | reverse | AWACTTCVGGRTGVCCAAARAATCA | Astrin & Stüben 2008 |
| 18S rRNA | 18S\_Tar\_Ff1 | forward | AGGCGAAACCGCGAATGGCTC | Stec *et al*., 2017 | Zeller (2010), in Stec *et al.,* 2015 |
| 18S\_Tar\_Rr1 | reverse | GCCGCAGGCTCCACTCCTGG | Stec *et al*., 2017 |
| 28S rRNA | 28S\_Eutar\_F | forward | ACCCGCTGAACTTAAGCATAT | Gąsiorek *et al*., 2018 | Mironov *et al.,* 2012 |
| 28S\_R0990 | reverse | CCTTGGTCCGTGTTTCAAGAC | Mironov *et al*., 2012 |
| ITS-2 | ITS2\_Eutar\_Ff | forward | CGTAACGTGAATTGCAGGAC | Stec *et al*., 2018 | Stec *et al.,* 2018 |
|  | ITS2\_Eutar\_Rr | reverse | TGATATGCTTAAGTTCAGCGG | Stec *et al*., 2018 |

References:

Astrin JJ, Stüben PE. 2008. Phylogeny in cryptic weevils: molecules, morphology and new genera of western Palaearctic Cryptorhynchinae (Coleoptera: Curculionidae). *Invertebrate Systematics* 22: 503–522

Gąsiorek, P., Stec, D., Zawierucha, K., Kristensen, R. M., & Michalczyk, Ł. (2018). Revision of Testechiniscus Kristensen, 1987 (Heterotardigrada: Echiniscidae) refutes the polar‐temperate distribution of the genus. Zootaxa, 4472, 261–297. <https://doi.org/10.11646/zootaxa.4472.2.3>

Michalczyk, Ł., Wełnicz, W., Frohme, M., & Kaczmarek, Ł. (2012). Redescriptions of three Milnesium Doyère, 1840 taxa (Tardigrada: Eutardigrada: Milnesiidae), including the nominal species for the genus. Zootaxa, 3154, 1–20. <https://doi.org/10.11646/zootaxa.3154.1.1>

Mironov, S. V., Dabert, J., & Dabert, M. (2012). A new feather mite species of the genus Proctophyllodes Robin, 1877 (Astigmata: Proctophyllodidae) from the Long‐tailed Tit Aegithalos caudatus (Passeriformes: Aegithalidae) – morphological description with DNA barcode data. Zootaxa, 3253, 54–61. <https://doi.org/10.11646/zootaxa.3253.1.2>

Stec, D., Morek, W., Gąsiorek, P., & Michalczyk, Ł. (2018). Unmasking hidden species diversity within the Ramazzottius oberhaeuseri complex, with an integrative redescription of the nominal species for the family Ramazzottiidae (Tardigrada: Eutardigrada: Parachela). Systematics and Biodiversity, 16, 357–376. <https://doi.org/10.1080/14772000.2018.1424267>

Stec, D., Smolak, R., Kaczmarek, Ł., & Michalczyk, Ł. (2015). An integrative description of Macrobiotus paulinae sp. nov. (Tardigrada: Eutardigrada: Macrobiotidae: hufelandi group) from Kenya. Zootaxa, 4052, 501–526. <https://doi.org/10.11646/zootaxa.4052.5.1>

Stec, D., Zawierucha, K., & Michalczyk, Ł. (2017). An integrative description of Ramazzottius subanomalus (Biserov, 1985) (Tardigrada) from Poland. Zootaxa, 4300, 403–420. <https://doi.org/10.11646/zootaxa.4300.3.4>