

**Table S1:** Morphological and molecular identification of tick samples collected from camels in Marsabit, northern Kenya, February-March 2020

| Sample ID | Morphological ID                | 12S rRNA (% homology, GenBank Accession)            | 16S rRNA (% homology, GenBank Accession) | COI (% homology, GenBank Accession)    | Consensus ID (GenBank Accession) <sup>1</sup>                       |
|-----------|---------------------------------|---|--|--|---|
| T1        | <i>Hyalomma dromedarii</i>      | <i>Hy. dromedarii</i> (99.7%, MH094484)             | <i>Hy. dromedarii</i> (100%, MN960589)   | <i>Hy. dromedarii</i> (100%, MT107484) | <i>Hy. dromedarii</i> (12S: MT895851; 16S: MT895169; COI: MT896151) |
| T108      | <i>Hyalomma dromedarii</i>      | <i>Hy. dromedarii</i> (100%, MH094484 and KT391030) | <i>Hy. dromedarii</i> (100%, MN960589)   | -                                      | <i>Hy. dromedarii</i> (12S: MT895852; 16S: MT895170)                |
| T120      | <i>Hyalomma dromedarii</i>      | <i>Hy. dromedarii</i> (100%, MH094484 and KT391030) | -  | -                                      | <i>Hy. dromedarii</i> (12S: MT895853)                               |
| T208      | <i>Rhipicephalus pulchellus</i> | <i>Rh. pulchellus</i> (100% KY676841, AF150024)     | <i>Rh. pulchellus</i> (100% MK774738)    | -                                      | <i>Rh. pulchellus</i> (12S: MT895854; 16S: MT895171)                |
| T209      | <i>Rhipicephalus pulchellus</i> | <i>Rh. pulchellus</i> (100% KY676841, AF150024)     | <i>Rh. pulchellus</i> (100% MK774738)    | -                                      | <i>Rh. pulchellus</i> (12S: MT895855; 16S: MT895172)                |
| T275      | <i>Rhipicephalus camicasi</i>   | <i>Rh. camicasi</i> (100% FJ536556, MH094506)       | -  | -                                      | <i>Rh. camicasi</i> (12S: MT895856)                                 |
| T281      | <i>Rhipicephalus camicasi</i>   | <i>Rh. camicasi</i> (100% FJ536556, MH094506)       | -  | -                                      | <i>Rh. camicasi</i> (12S: MT895857)                                 |
| T303      | <i>Hyalomma impeltatum</i>      | <i>Hy. impeltatum</i> (100% KX132904, MN315384)     | <i>Hy. impeltatum</i> (100% MN394439)    | <i>Hy. impeltatum</i> (99.2% KU130599) | <i>Hy. impeltatum</i> (12S: MT895858; 16S: MT895175; COI: MT896152) |
| T318      | <i>Hyalomma impeltatum</i>      | <i>Hy. impeltatum</i> (100% KX132904, MN315384)     | <i>Hy. impeltatum</i> (100% MN394439)    | <i>Hy. impeltatum</i> (99.2% KU130599) | <i>Hy. impeltatum</i> (12S: MT895859; 16S:                          |

|             |                           |   |   |  |   |
|-------------|---------------------------|---|---|--|---|
|             |                           |   |   |  | MT895176; COI:<br>MT896153)   |
| <b>T362</b> | <i>Hyalomma rufipes</i>   | <i>Hy. rufipes</i> (100% MN394460)      | <i>Hy. rufipes</i> (100%<br>MK737650, MK737649) | -                                      | <i>Hy. rufipes</i> (12S:<br>MT895860; 16S:<br>MT895177)                   |
| <b>T403</b> | <i>Hyalomma rufipes</i>   | <i>Hy. rufipes</i> (100% MN394460)      | <i>Hy. rufipes</i> (100%<br>MK737650, MK737649) | <i>Hy. rufipes</i> (99.7%<br>JX049282) | <i>Hy. rufipes</i> (12S:<br>MT895861; 16S:<br>MT895178; COI:<br>MT896154) |
| <b>T700</b> | <i>Amblyomma lepidum</i>  | <i>Am. lepidum</i> (100%<br>MK332385)   | <i>Am. lepidum</i> (100%<br>KP987777)           | -                                      | <i>Am. lepidum</i> (12S:<br>MT895862; 16S:<br>MT895179)                   |
| <b>T708</b> | <i>Amblyomma lepidum</i>  | -                                       | <i>Am. lepidum</i> (100%<br>MK737651)           | -                                      | <i>Am. lepidum</i> (16S:<br>MT895180)                                     |
| <b>T710</b> | <i>Amblyomma gemma</i>    | <i>Am. gemma</i> (99.7% KX377407)       | -   | -                                      | <i>Am. gemma</i> (12S:<br>MT895863)                                       |
| <b>T749</b> | <i>Amblyomma gemma</i>    | <i>Am. gemma</i> (99.7% KX377407)       | -   | -                                      | <i>Am. gemma</i> (12S:<br>MT895864)                                       |
| <b>T852</b> | <i>Hyalomma truncatum</i> | <i>Hy. truncatum</i> (100%<br>KU568497) | <i>Hy. truncatum</i> (99.4%<br>KU130475)        | -                                      | <i>Hy. truncatum</i> (12S:<br>MT895865; 16S:<br>MT895181)                 |

<sup>1</sup> accession numbers of samples deposited in GenBank as part of the present study