**Table 1 Rodents species captured and their seroprevalence of leptospiral antibodies in various species of rodents in the Tanga region, Tanzania (n=201)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | No. of captured and tested | Sex  F | M | No of positive | % of positive within species |
| *Acomys* spp*.* | 7 | 2 | 5 | 1 | 14.29 |
| *Lemniscomys* spp. | 2 | 0 | 2 | 0 | 0.00 |
| *Mastomys natalensis* | 51 | 19 | 32 | 3 | 5.88 |
| *Rattus rattus* | 126 | 67 | 59 | 8 | 6.35 |
| *Tatera* spp. | 15 | 8 | 7 | 0 | 0.00 |
| Total | 201 | 96 | 105 | 12 | 6.0 |

**Table 2 Sero-prevalence of Leptospira antibodies in cattle in the study area (n= 80)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters Categories** | | **Number positives** | **Percentage Prevalence** |
| Sex | Cow | 3 | 3.8 |
|  | Bull | 7 | 8.8 |
| Grazing pattern | Extensive | 7 | 8.8 |
|  | Zero | 3 | 3.8 |
| Location (Division) | Amani | 1 | 1.3 |
|  | Bwembwera | 1 | 1.3 |
|  | Muheza | 3 | 3.8 |
|  | Ngomeni | 5 | 6.3 |

**Table 3 Number and percentage of study subjects found seropositive to *Leptospira* bacteria with socio-demographics information of the study participants (n=198)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Category | No. and (%) of participants examined | No. and % of participants tested seropositive | Chi-square (χ2) | P-Value |
| Sex | Female | 96(48.5) | 12(6.06) | 0.656 | 0.418 |
| Male | 102(51.5) | 14(7.07) |  |  |
| Occupation | Business | 46(23.2) | 10(5.05) | 4.771 | 0.549 |
| Employee | 26(13.1) | 0(0.00) |  |  |
| Farmers | 100(50.5) | 15(7.58) |  |  |
| Students | 26(13.1) | 1(0.50) |  |  |
| Location | Amani | 33(16.7) | 4(2.02) | 2.115 | 0.549 |
| Bwembwera | 17(8.6) | 3(1.50) |  |  |
| Muheza | 60(30.3) | 7(3.50) |  |  |
| Ngomeni | 88(44.4) | 12(6.06) |  |  |
| Age | 18-35 | 107(54.0) | 10(5.05) | 48.864 | 0.284 |
| 36-59 | 80(40.4) | 15(7.58) |  |  |
| ≥60 | 11(5.6) | 1(0.50) |  |  |

**Table 4 Seroprevalence of different leptospiral serovars in rodents, humans, and cattle in the Tanga region, Tanzania.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Species | Rodents |  | Humans |  | Cattle |  |
| Serovars | No of positive | % | No of positive | % | No of positive | % |
| Pomona | 1 | 0.50 | 1 | 0.51 | 0 | 0.00 |
| Hebdomadis | 2 | 1.00 | 7 | 3.54 | 4 | 5.00 |
| Canicola | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Grippotyphosa | 4 | 1.99 | 12 | 6.06 | 5 | 6.25 |
| Sokoine | 7 | 3.48 | 9 | 4.55 | 4 | 5.00 |
| Lora | 1 | 0.50 | 1 | 0.51 | 0 | 0.00 |
| Total | 15 | 7.47 | 30 | 15.17 | 13 | 16.25 |

**Table 5. Logistic Regression to assess the association of seroprevalence of Leptospira antibodies in humans, rodents, and cattle to different variables**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Categories | Estimate Std. | Std. Error | z value | Odds ratio | | 95% confidence interval | Pr(>|z|) |
| (Intercept) |  | -2.16 | 0.54 | -4.03 | | 0.12 | 0.04-0.33 | 5.7e-05 \*\*\* |
| Sex: | Male | -0.18 | 0.31 | -0.58 | | 0.83 | 0.45-1.54 | 0.5636 |
| Location: | Bwembwera | -0.63 | 0.73 | -0.87 | | 0.53 | 0.13-2.22 | 0.3863 |
|  | Muheza | 0.24 | 0.53 | 0.46 | | 1.28 | 0.46-3.58 | 0.6424 |
|  | Ngomeni | 0.75 | 0.48 | 1.56 | | 2.12 | 0.82-5.47 | 0.1189 |
| Species | Human | -0.06 | 0.42 | -0.13 | | 0.94 | 0.41-2.17 | 0.8930 |
|  | Rodents | -0.83 | 0.47 | -1.76 | | 0.44 | 0.17-1.10 | 0.0785 |