**Supplementary Material**

A review of published and unpublished surveys of a red-listed ‘flagship species’, the Western Tragopan *Tragopan melanocephalus* in Azad Jammu and Kashmir, Pakistan

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Appendix S1.Complete list of published and unpublished Western Tragopan surveys together with their geographical location and unsurveyed locations that are likely to confirm the species based on reports by local herdsmen, hunters and wildlife staff

Appendix S1. Complete list of published and unpublished Western Tragopan surveys together with their geographical location (Tab. 1a) and unsurveyed locations that are likely to confirm the species based on reports by local herdsmen, hunters and wildlife staff (Tab. 1b). For each surveyed location the exact coordinates of the survey plot are given where possible together with its local name, year of data collection, survey method, number of birds recorded and corresponding original Reference. For unsurveyed locations interim coordinates are given in brackets, n/a = not applicable.

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| --- | --- | --- | --- | --- | --- |
| **Table 1a.** Surveyed areas to date |  |  |  |  |  |
| Area/location | Coordinates | Local name | Year | Survey method | Number of birds recorded | Reference |
| **A** | **Machiara National Park** |   |   |   |  |   |
| 1 |  34° 33.570'N, 73° 31.557'E | Resh gar | 2008 | point count (1 plot) | 2 calling males | Awan and Buner 2010 |
| 2 |  34° 33.765'N, 73° 32.225'E | Jabsir | 2008 | point count (1 plot) | 2 calling males  | Awan and Buner 2010 |
| 3 |  34° 33.543'N, 73° 32.997'E | Loy dandy | 2008 | point count (1 plot) | 1 calling male | Awan and Buner 2010 |
| 4 |  34° 34.649'N, 73° 33.000'E | Sokar | 2008 | point count (1 plot) | 2 calling males | Awan and Buner 2010 |
| 5 |  34° 34.758'N, 73° 35.471'E | Musa gali | 2008 | point count (1 plot) | 1 calling male | Awan and Buner 2010 |
| 6 |  34° 33.555'N, 73° 36.566'E | Kuthiali | 2008 | point count (1 plot) | 2 calling males  | Awan and Buner 2010 |
| 7 |  34° 32.676'N, 73° 37.337'E | Domailan | 2008 | point count (1 plot) | 3 calling males  | Awan and Buner 2010 |
| 8 |  34° 32.751'N, 73° 38.294'E | Raveri | 2008 | point count (1 plot) | 5 calling males | Awan and Buner 2010 |
|   | n/a | Raveri | 1982 | transect | 3 males seen, 7 heard; 3 females seen, 1 heard  | Islam 1982 |
| 9 |  34° 30.009'N, 73° 40.054'E | Baga chat | 2008 | point count (1 plot) | 4 calling males | Awan and Buner 2010 |
| 7-8 | n/a | across Domailan and Raveri | 1977 | beating method | 7 males, 6 females  | Mirza et al. 1978 |
| 6-8 | n/a | across 6,7 and 8 | 1983 | transect | 22 in total | Islam and Crawford 1987 |
| 1-9 | n/a | across National Park | 2006 | 1-km transects | 26 in total | Anwar 2006 |
| 1-9 | n/a | across National Park | 1997 | transect | 5 in total | Ahmad 1997a |
| 1-9 | n/a | across National Park | 2004 | transect | 15 in total  | Hassan 2005 |
|  |
| **B** | **Jagran valley** |  |  |  |  |  |
| 10 |  34° 32.277'N, 73° 41.991'E | Mattu | 2012 | point count (dawn and dusk) | 3 males recorded (3 at dawn, 2 dusk) | Awan 2013 |
| 11 |  34° 31.469'N, 73° 44.072'E | Kummu | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 2 dusk) | Awan 2013 |
| 12 |  34° 31.329'N, 73° 45.354'E | Zingeri | 2012 | point count (dawn and dusk) | 1 male heard (1 dawn, 1 dusk) | Awan 2013 |
| 13 |  34° 31.952'N, 73° 47.344'E | Nemali | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 1 dusk)  | Awan 2013 |
| 12-13 | n/a | Kutton | 1982 | transect | 2 males heard, 2 males flushed; 1 female heard  | Islam 1982 |
| 12-13 | n/a | Kutton | 1977 | beating method and call counts | 9 males heard, 7 males and 4 females flushed  | Mirza et al. 1978 |
| 14 |  34° 34.960'N, 73° 42.594'E | Bungus | 2012 | point count (dawn and dusk) | 2 males recorded (1 dawn, 2 dusk) | Awan 2013 |
| 15 |  34° 36.350'N, 73° 44.194'E | Seri | 2012 | point count (dawn and dusk) | 1 male recorded (1 dawn, 0 dusk) | Awan 2013 |
| 16 |  34° 37.738'N, 73° 44.218'E | Chakalni | 2012 | point count (dawn and dusk) | 1 male recorded (1 dawn, 1 dusk) | Awan 2013 |
| 17 |  34° 37.973'N, 73° 48.237'E | Daba Misra | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 2 dusk) | Awan 2013 |
| 18 |  34° 37.473'N, 73° 47.853'E | Goreal Nullah | 2012 | point count (dawn and dusk) | 3 males recorded (3 dawn, 3 dusk) | Awan 2013 |
| 19 |  34° 36.757'N, 73° 47.532'E | Dandhorean | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 1 dusk)  | Awan 2013 |
| 20 |  34° 36.170'N, 73° 47.183'E | Dori | 2012 | point count (dawn and dusk) | 2 males recorded (1 dawn, 2 dusk) | Awan 2013 |
| 21 |  34° 36.665'N, 73° 48.191'E | Kayyan | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 1 dusk)  | Awan 2013 |
|  |
| **C** | **Outside Salkhala Game Reserve**  |   |   |  |   |
| 22 |  34° 34.012'N, 73° 58.724'E | Rawta Nullah | 2010 | point count (dawn only) | 1 calling male | Awan 2010  |
| 23 |  34° 32.899'N, 73° 57.896'E | Paleri Nullah | 2010 | point count (dawn only) | 3 calling males  | Awan 2010  |
| 27 |  34° 30.130'N, 73° 54.655'E | Gail Nullah | 2010 | point count (dawn only) | 4 calling males  | Awan 2010  |
|   | n/a | Gail Nullah | 2000 | Prosecution report | 1 bird shot | Anonymous 2000 |
| 28 |  34° 29.635'N, 73° 53.779'E | Islampura | 2010 | point count (dawn only) | 2 calling males | Awan 2010  |
| 51 |  34° 32.576'N, 73° 57.223'E | Rawta  | 2014 | point count (dawn only) | 1 male  | Awan 2014 |
| 52 |  34° 32.385'N, 73° 55.196'E | Palri Nullah | 2014 | point count (dawn only) | 2 males  | Awan 2014 |
| 53 |  34° 31.054'N, 73° 54.887'E | Gail  | 2014 | point count (dawn only) | 1 male  | Awan 2014 |
|  |
| **D** | **Inside Salkhala Game Reserve**  |   |   |  |   |
| 24 |  34° 32.001'N, 73° 55.525'E | Salkhala Nullah | 2010 | point count (dawn only) | 2 calling males | Awan 2010  |
| 25 |  34° 32.332'N, 73° 55.385'E | Raran | 2007 | point count (dawn only) | 7 calling males in May, 6 calling males in June | Awan et al. 2012 |
| b | n/a | Thapla, Urnian and Purzaan | 2003 | transect | 8 birds (sex ratio unknown)  | Anonymous 2003 |
| c | n/a | Rian and Hakan Dunga | 2005 | transect | 16 birds (sex ratio unknown)  | Anonymous 2005 |
| 26 |  34° 31.834'N, 73° 53.939'E | Purzaan | 2010 | point count (dawn only) | 1 calling male | Awan 2010  |
| 24-26 | n/a | across whole Reserve | 1977 | beating method and call counts | 12 calling males, 2 males and 4 females flushed | Mirza 1978 |
| 24-26 | n/a | across whole Reserve | 1982 | transect | 1 calling male, 2 seen; 5 calling females,1 seen;1 juv | Islam 1982 |
| 24-26 | n/a | across whole Reserve | 1983 | transect | 17 in total | Islam and Crawford 1987 |
| 24-26 | n/a | across whole Reserve | 1999 | transect  | 6 in total | Sabir et al. 1999 |
|  |  |  |  |  |  |  |
| **E** | **Pir-Chinasi/Pir-Hasimar area** |  |  |  |  |
| 29 |  34° 20.970'N, 73° 39.923'E | Khizar | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 30 |  34° 21.956'N, 73° 38.183'E | Keran  | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 31 |  34° 21.146'N, 73° 37.492'E | Pir-Hasimar | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 32 |  34° 22.538'N, 73° 37.270'E | Beensian | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 33 |  34° 23.221'N, 73° 36.769'E | Perthan | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 34 |  34° 23.395'N, 73° 36.374'E | Bukar Thali  | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 35 |  34° 23.820'N, 73° 35.705'E | Nagan 1 | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 36 |  34° 23.812'N, 73° 35.502'E | Nagan 2  | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 37 |  34° 23.751'N, 73° 35.052'E | Nagan 3 | 2012 | point count (dawn and dusk) | 2 males recorded (2 dawn, 1 dusk) | Awan 2013  |
| 38 |  34° 23.677'N, 73° 34.908'E | Nagan 4 | 2012 | point count (dawn and dusk) | 1 male recorded (1 dawn, 1 dusk) | Awan 2013  |
| 39 |  34° 23.594'N, 73° 34.837'E | Jodar Gali | 2012 | point count (dawn and dusk) | none during breeding season but present in winter | Awan 2013  |
| 35-39 | n/a | across Nagan | 1998 | Hunting report | 1 bird shot | Anonymous 1998 |
| 29-39 | n/a | across area | 1991 | report | none | Islam 1991 |
|  |  |  |  |  |  |  |
| **F** | **Katha Peeran** |  |  |  |  |  |
| 44 |  34° 37.502'N, 73° 52.141'E | Jandrai | 2014 | point count (dawn only) | 2 males  | Awan 2014 |
| 45 |  34° 37.085'N, 73° 52.025'E | Doga | 2014 | point count (dawn only) | 1 male  | Awan 2014 |
| 46 |  34° 37.819'N, 73° 51.140'E | Bungus | 2014 | point count (dawn only) | 2 males  | Awan 2014 |
| 47 |  34° 37.766'N, 73° 50.756'E | Kala Burz | 2014 | point count (dawn only) | 3 males  | Awan 2014 |
| 48 |  34° 37.578'N, 73° 50.574'E | Choorian | 2014 | point count (dawn only) | 2 males  | Awan 2014 |
| 49 |  34° 37.046'N, 73° 50.503'E | Jabri | 2014 | point count (dawn only) | none | Awan 2014 |
| 50 |  34° 36.521'N, 73° 49.915'E | Cill | 2014 | point count (dawn only) | none | Awan 2014 |
|  |  |  |  |  |  |  |
| **G** | **Jura** |  |  |  |  |  |
| 54 | 34° 31.051'N, 73° 46.161'E | Sathrum | 2014 | point count (dawn only) | 2 males  | Awan 2014 |
| 55 |  34° 30.302'N, 73° 46.328'E | Bari Behak | 2014 | point count (dawn only) | none | Awan 2014 |
| 56 |  34° 29.337'N, 73° 47.502'E | Chitta Pani | 2014 | point count (dawn only) | none | Awan 2014 |
|  |  |  |  |  |  |  |
| **H** | **Moji Game Reserve** |  |  |  |  |  |
| 57 |  (34° 19.523'N, 73° 45.582'E) | n/a |  | no survey to date |  | likely present  |
| 58 |  (34° 18.670'N, 73° 45.574'E) | n/a |  | no survey to date |  | likely present |
| 59 |  (34° 17.483'N, 73° 45.861'E) | n/a |  | no survey to date |  | likely present |
| 60 |  (34° 16.681'N, 73° 45.834'E) | n/a |  | no survey to date |  | likely present |
| 61 | (34° 16.266'N, 73° 46.850'E) | n/a |  | no survey to date |  | likely present |
| 62 |  (34° 16.036'N, 73° 48.115'E) | n/a |  | no survey to date |  | likely present |
| 63 |  (34° 16.590'N, 73° 49.033'E) | n/a |  | no survey to date |  | likely present |
| 57-63 | n/a | across Game Reserve | 1996 | transects | 10 individuals in total | Ahmad 1997b |
| 57-63 | n/a | across Game Reserve | 1998 | point counts | 14 individuals in total | Ahmed 1999 |
|  |
| **I** | **Qazi Nag Game Reserve** |  |  |  |  |  |
| 78 |  (34° 13.780'N, 73° 59.525'E) | n/a |  | no survey to date |  | likely present |
| 79 |  (34° 13.618'N, 73° 59.983'E) | n/a |  | no survey to date |  | likely present |
| 80 |  (34° 12.808'N, 73° 59.690'E) | n/a |  | no survey to date |  | likely present |
| 81 |  (34° 11.607'N, 73° 59.622'E) | n/a |  | no survey to date |  | likely present |
| 78-81 | n/a | across Game Reserve | 1999 | transects | 20 individuals in total | Qureshi et al. 1999 |
|  |  |  |  |  |  |  |
| **Table 1b. Unsurveyed areas to date** |  |  |  |  |
| Area/location | Coordinates | Local name | Year | Survey method | Number of birds recorded | Reference |
| **J** | **Upper Neelum Valley** |  |  |  |  |  |
| 40 |  (34° 47.806'N, 74° 19.966'E) | n/a |  | no survey to date |  | likely present |
| 41 |  (34° 47.331'N, 74° 17.679'E) | n/a |  | no survey to date |  | likely present |
| 42 |  (34° 43.465'N, 74° 12.075'E) | n/a |  | no survey to date |  | likely present |
| 43 |  (34° 41.509'N, 74° 09.092'E) | n/a |  | no survey to date |  | likely present |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **K** | **Leepa Valley** |  |  |  |  |  |
| 64 |  (34° 16.182'N, 73° 50.447'E) | n/a |  | no survey to date |  | likely present |
| 65 |  (34° 14.137'N, 73° 50.585'E) | n/a |  | no survey to date |  | likely present |
| 66 |  (34° 14.795'N, 73° 51.438'E) | n/a |  | no survey to date |  | likely present |
| 67 |  (34° 14.848'N, 73° 52.089'E) | n/a |  | no survey to date |  | likely present |
| 68 |  (34° 15.119'N, 73° 52.985'E) | n/a |  | no survey to date |  | likely present |
| 69 |  (34° 15.306'N, 73° 53.858'E) | n/a |  | no survey to date |  | likely present |
| 70 |  (34° 15.264'N, 73° 54.461'E) | n/a |  | no survey to date |  | likely present |
| 71 |  (34° 15.278'N, 73° 54.974'E) | n/a |  | no survey to date |  | likely present |
| 72 |  (34° 15.145'N, 73° 55.444'E) | n/a |  | no survey to date |  | likely present |
| 73 |  (34° 15.135'N, 73° 55.897'E) | n/a |  | no survey to date |  | likely present |
| 74 |  (34° 15.148'N, 73° 56.202'E) | n/a |  | no survey to date |  | likely present |
| 75 |  (34° 15.132'N, 73° 56.498'E) | n/a |  | no survey to date |  | likely present |
| 76 |  (34° 15.144'N, 73° 56.884'E) | n/a |  | no survey to date |  | likely present |
| 77 |  (34° 15.152'N, 73° 57.660'E) | n/a |  | no survey to date |  | likely present |
|  |  |  |  |  |  |  |
| **L** | **Haveli Kahuta** |  |  |  |  |  |
| 82 |  (33° 56.777'N, 74° 03.059'E)  | Mori Said Ali Game Reserve |  | no survey to date | present but number unknown | Dar 2006 |
| 83 |  (33° 59.883'N, 74° 12.862'E) | Phalla Game Reserve |  | no survey to date | present but number unknown  | Dar 2006 |
| 84 |  (34° 00.108'N, 74° 13.279'E) | Phalla Game Reserve |  | no survey to date | present but number unknown | Dar 2006 |
| 85 |  (34° 00.097'N, 74° 14.154'E) | n/a |  | no survey to date |  | likely present |
| 86 |  (33° 59.111'N, 74° 15.934'E) | n/a |  | no survey to date |  | likely present |
| 87 |  (33° 56.597'N, 74° 16.260'E) | Hillan Game Reserve |  | no survey to date | present but number unknown | Dar 2006 |
| 88 |  (33° 56.132'N, 74° 15.943'E) | Hillan Game Reserve |  | no survey to date | present but number unknown | Dar 2006 |
| 89 |  (33° 51.033'N, 74° 12.354'E) | n/a |  | no survey to date |  | likely present |
| 90 |  (33° 50.677'N, 74° 11.608'E) | n/a |  | no survey to date |  | likely present |
|  |