Featuring

FOREST NEWS
TIGERPAPER is a quarterly news bulletin dedicated to the exchange of information relating to wildlife and national parks management for the Asia-Pacific Region.

**ISSN 1014 - 2789**

**Address.**

TIGERPAPER
FAO Regional Office for Asia and the Pacific
Malian Mansion, Phra Atit Road
Bangkok, 10200, Thailand
Tel: (662) 697-4000
E-mail: fao-rap@fao.org
Website: [http://www.fao.org/world/regional/rap/tigerpaper/tigerpaper.htm](http://www.fao.org/world/regional/rap/tigerpaper/tigerpaper.htm)

**Editor:** Janice Naewboonnien
**Advisor:** P. Durst

TIGERPAPER is dependent upon your free and voluntary contributions in the form of articles, news items, and announcements in the field of wildlife and nature conservation in the region. In order to better serve the needs of our readers please write to us and send in the information you have or let us know if there is any information that you need. We appreciate receiving your letters and make all efforts to respond.

Front cover: Argali-Nov98-Ik Nartin Mongolia (Photo: Michael Frisina)

The opinions expressed by the contributing authors are not necessarily those of FAO. The designations employed and the presentation of the material in the TIGERPAPER do not imply the expression of any opinion on the part of FAO concerning the legal or constitutional status of any country, territory or sea area, or the delimitation of frontiers.

### Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mongolian argali population, Spring 2009</td>
<td>1</td>
</tr>
<tr>
<td>Kaziranga - making way for the tiger reserve</td>
<td>5</td>
</tr>
<tr>
<td>Habitat ecology of Himalayan serow in Annapurna</td>
<td>12</td>
</tr>
<tr>
<td>Conservation Area of Nepal</td>
<td>12</td>
</tr>
<tr>
<td>New site reports of four-horned antelope</td>
<td>20</td>
</tr>
<tr>
<td>Diversity of lower vertebrates in Kuno Wildlife Sanctuary,</td>
<td>23</td>
</tr>
<tr>
<td>proposed second home for Asiatic lions</td>
<td></td>
</tr>
<tr>
<td>Wetland management strategies in Bangladesh</td>
<td>26</td>
</tr>
<tr>
<td>Occurrence of albino macaque in desert town of Bikaner</td>
<td>28</td>
</tr>
<tr>
<td>Mudumalai Wildlife Sanctuary and National Park</td>
<td>31</td>
</tr>
</tbody>
</table>

---

**FOREST NEWS**

Forest development: a vital balance -

- Report from the XIII World Forestry Congress                      | 1    |
- Bhutan to welcome 23rd Session of the Asia-Pacific Forestry Commission | 4    |
- Codes of practice for forest harvesting -- monitoring and evaluation | 6    |
- Charting paths for regional collaboration                          | 8    |
- The youth are our future - FAO invests in them!                   | 9    |
- Commonwealth Forestry Association honors FAO forestry expert       | 11   |
- UN-REDD picking up speed in South East Asia                       | 12   |
- Third Executive Forest Policy Short Course: Enhancing forest policy in the Greater Mekong Region | 14   |
- Asia-Pacific Forestry Chips and Clips                             | 16   |
- FAO Asia-Pacific Forestry Calendar                                 | 16   |

---
MONGOLIAN ARGALI POPULATION, SPRING 2009

by Michael R. Frisina and Baigalmaa Purevsuren

Argali (Ovis ammon) wild sheep occur throughout central Asia, including Mongolia’s steppe, undulating desert, and rugged mountainous landscapes (Valdez, 1982, Geist, 1991, Mitchell and Frisina, 2007). Although their ranges are not well defined and some overlap may occur, Shackleton and Lovari (1997) are among those who recognize two subspecies of argali as occurring in Mongolia: the Altai argali (O. a. ammon) of western Mongolia and the Gobi argali (O. a. darwini) of the Gobi Desert in southern Mongolia. Both are listed as rare by the Mongolian Government (MNEM, 1997) and are included in the United States Fish and Wildlife Service list of endangered and threatened wildlife and plants (USFWS, 1997). In addition, they are listed as vulnerable and endangered by IUCN (2000) and are in Appendix II of CITES (USFWS, 2001).

Mongolia, a central Asian landlocked country, encompasses about 1,656,000 km², of which approximately 25% is potential argali habitat (ASM, 1990). Limited international sport hunting has been permitted since 1968. The current Mongolian hunting law, established in 1995 and administered by the Mongolian Ministry for Nature and the Environment, regulates the commercial use of wildlife. Hunting fees are an important source of foreign currency in a badly depressed economy (MNEM, 1995, Wingard and Purevdolgor, 2001).

Argali populations are believed to have declined in Mongolia and throughout central Asia during the last century (Harper, 1945; Mallon, 1985; Heptner et al., 1989; Mallon et al., 1997; Reading et al., 1997). Specific and comparable country-wide population...
status and trend information for this species, a fundamental requirement for conservation (Wegge, 1997), is lacking. The most recent monitoring of Mongolian argali populations was conducted in 2002 and a population estimate of 20,226 was reported (Frisina et al., 2007). About 7 years have passed since the last reported surveys were conducted, so checks for production and population status at 8 locations were made during April 2009. These data were collected as a precursor to a range-wide survey to be conducted during late fall 2009.

Methods

Methods used for locating, surveying, and classifying argali follow protocols described by Frisina et al. (2007). From April 24 through April 28, we collected argali observations at 8 locations (Table 1, Figure 1). We originally intended to include sampling sites in the West Zone (Figure 1), but difficult weather conditions made observing argali in the Altai impossible during the allotted field time. The West Zone will be surveyed during the 2009 fall survey. Most recent taxonomies by scientists classify argali at locations covered by this report as Ovis ammon darwini. Some trophy hunting records consider those sheep in locations 1, 4, 5, 6, 7, and 8 as the Hangai trophy type (Mitchell and Frisina, 2007).

Conclusions

During the April 2009 survey, 5 days were spent observing argali (4/23, 4/24, 4/25, 4/27, 4/28). A total of 1,159 argali were observed (Table 1), which amounts to about 232 argali observed per observation day. While this information does not establish a trend, it does indicate that argali were abundant at the 8 areas surveyed. The average number of argali observed per observation site for the 8 sites surveyed was 145 (range 42-286, SD = 93.6). The range-wide survey planned for fall 2009 will be directly comparable to the survey reported by Frisina et al. (2007) and will be used to establish trends between 2002 and 2009. Argali are more observable during the November rutting season than in April, when ewes are preparing to give birth and are therefore more secretive and scattered. Thus, data from this survey is not directly comparable with information reported by Frisina et al. (2007).

A total of 608 adult ewes and 285 lambs were observed yielding an observed ratio of 47 lambs per 100 ewes. It is important to keep in mind that the lambs reported here were born in May of 2008; the ratio represents the portion of recruitment that survived the 2008-2009 winter. These lambs will be classified as yearlings once the 2009 lambing season is completed in early June. With that consideration, this ratio of 47 lambs per 100 ewes represents not only good reproduction, but also good overwinter survival of lambs. Frisina et al. (2007) reported an observed ratio of 29 lambs per 100 ewes for November 2002 (prior to any winter mortality). The data reported here indicates a significant improvement in lamb production and survival compared to 2002. In a synthesis of information Frisina et al. (2002) reported a range of 10 to 63 lambs per 100 ewes observed for earlier surveys, all of which were measured prior to any winter mortality occurring.

A total of 1,150 argali were classified; of these 96 or 8.4% were Class 4 or trophy rams (Table 1.). Of the total 257 rams observed, 187 or 73% were ≥5 years of age (Class 3 and Class 4), amounting to an observed ratio of about 31 breeding age rams per 100 adult ewes (1 breeding age ram per 3 ewes). These data indicate that adequate numbers of breeding age rams are being maintained in the population for natural reproductive processes to be maintained. The relatively high proportion of trophy males (37% of males observed) and relatively high proportion of Class 3 rams (35% of observed males) indicates a significant portion of rams are surviving into the older age classes. The data also indicates that there are significant numbers of Class 3 rams available to replace Class 4 males as they die of natural causes or are removed from the population through legal harvest. These data indicate that the trophy harvest has not been excessive and that poaching has not significantly inhibited maintenance of adequate numbers of mature rams for breeding or harvest.

It will not be possible to make a definitive judgment on population trends between 2002 and 2009 until we complete the range-wide survey scheduled for this fall. However, the data collected during this
April survey for the North Zone and South & East Zone indicates that things may have improved for the argali since 2002.

References


Wingard, P. R. & O. Purevdologor. 2001. Compendium of Environmental Law and practice in Mongolia. GTZ Commercial and
Civil Law Reform Project, Ministry of Finance, Ulaanbaatar, Mongolia.

Acknowledgements

The authors gratefully acknowledge Mr. Galbadrakh Baranz (Mongol Tour), Mr. Baasanu Jantzen (Genesis), Mr. Nergui (New World Juulchin Tours), Mr. Buyandelger (Mongol Safari Co.) and the Mongolian Hunters Association for funding the field surveys and making logistical arrangements. Dennis Campbell (Grand Slam Club Ovis) and John Jackson lll (Conservation Force) also supported the project. The project was conducted in cooperation with the Mongolian Ministry of Nature, Environment and Tourism.

Authors’ addresses: Michael R. Frisina, PhD. Adjunct Professor of Range Sciences, Montana State University Bozeman and Executive Director August L. Hormay Wildlands Institute. mfrisina@bresnan.net; Baigalmaa Purevsuren, M. S. Range Scientist. Ulaanbaatar Mongolia.

Table 1. Argali observations from ground surveys conducted from April 23 through April 28, 2009.

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
<th>Female</th>
<th>Lamb</th>
<th>Rams</th>
<th>Uncl.</th>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
<th>Class 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>216</td>
<td>125</td>
<td>64</td>
<td>18</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>230</td>
<td>154</td>
<td>56</td>
<td>20</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>42</td>
<td>26</td>
<td>5</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>95</td>
<td>53</td>
<td>18</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>72</td>
<td>19</td>
<td>13</td>
<td>40</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>286</td>
<td>132</td>
<td>89</td>
<td>65</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>19</td>
<td>41</td>
</tr>
<tr>
<td>7</td>
<td>173</td>
<td>85</td>
<td>32</td>
<td>56</td>
<td>0</td>
<td>8</td>
<td>10</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>14</td>
<td>8</td>
<td>23</td>
<td>0</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>1,159</td>
<td>608</td>
<td>285</td>
<td>257</td>
<td>9</td>
<td>25</td>
<td>45</td>
<td>91</td>
<td>96</td>
</tr>
</tbody>
</table>

1For locations see Figure 1.

Figure 1. Locations of argali survey sites visited from April 24 through April 28, 2009. The three zones are from Frisina et al. (2007).