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ODONATA COLLECTION FROM THE BUREINSKII STATE NATURE RESERVE, Khabarovskii Krai, Russia

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Abstract – 11 spp., all boreal, were collected in 2004-2005 in the Reserve, which is situated within the larch taiga zone of the Russian Far East, ca 52°N and 500-2175 m a.s.l. Interesting is the presence of *Somatochlora sahlbergi* Trybom, but the southernmost locality of this sp. is on the Sokhondo Mt in Transbaikalia.

Introduction

The Russian Far East extends from the Chukotka peninsula in the North to the border of North Korea in the South, i.e. from the tundra to the temperate polydominant coniferous/broad-leaved forest zone in the South. The southern Far East, that is the southern Amur province, Khabarovskii Krai and Primorskii Krai, possesses the richest fauna of Odonata in Russia, enriched with the East Asian (palaearchaeartic) elements, and was paid much attention by odonatologists (BELYSHEV, 1973, MALIKOVA, 1995 etc.). The fauna of the northern Far East is rather poor and poorly studied, only the Kamchatka peninsula is rather well assessed (DU-

MONT et al., 2005). Therefore even fragmentary data from the territories situated N of the Amur river valley are worthwhile publishing. Here we report on Odonata collected by entomologists (non-odonatologists) of the Institute of Animal Systematics and Ecology, Novosibirsk, Drs I.I. Lyubchanskii and V.V. Dubatolov, in the Bureinskii State Nature Reserve, Khabarovskii Krai, in summer 2004-2005.

The area

The Bureinskii State Nature Reserve is situated at the middle of the Khabarovskii Krai (an enormous Far Eastern province of Russia), in the uppermost reaches of the Bureya river, one of the main left tributaries of the great Amur (Heilongjiang) river, and descends in southwestern direction from a large massif of the so-called mountains of Bureya. This mountainous area may be found on a large map as situated about in front of the southwestern corner of the Okhot Sea (with the Bureya flowing from this mountains in the opposite direction). The Bureya headwaters are bordered by the particu-

lar mountain ranges of Dusse-Alin' in South-east and Ezop in the North. Hypsometrical elevations over the Reserve territory range within 500-2175 m a.s.l. This is an unpopulated area, totally clad with taiga, except for the highlands above the tree line. The Reserve resides within the zone of larch taiga, and open larch (*Larix cajanderi*) stands predominate over its territory up to about 1400-1500 m a.s.l. River valleys are dominated by spruce (*Picea ajanensis*), spruce-fir (*Abies nephrolepis*) and poplar (*Populus suaveola*) forests and bogged open larch stands. Spruce forests are also scattered over the southern and southwestern slopes. Above 1400-1500 m a.s.l., subhighland dwarf pine (*Pinus pumila*) thickets and (much less presented) stone birch (*Betula lanata*) open stands are developed, which at 1700-1800 m a.s.l. are replaced by fruticulose-lichen and mossy mountain tundras and large-tone screes (BORISOV et al., 2000).

Collecting sites

For simplicity they are designated with short conventional names:

- S t r e l k a: the Strelka cordone (a base of the Reserve staff) at the junction of the Pravaya [right] Bureya and Levaya [left] Bureya rivers 51°33'N, 134° 03'E, about 500 m a.s.l.;
 - P r a v a y a B u r e y a: the Pravaya Bureya river valley right board, 51°40'196"N, 134°17'113"E;
 - M e d v e z h y e: the Medvezhye Zimovye hut, 52°08'692"N, 134°18'777"E, about 850 m a.s.l.;
 - G o r g e: a gorge in the area of the Lednikovy brook headwaters, dwarfpine (*Pinus pumila* L.) thickets, 2008 m a.s.l., 52°06'483"N, 134°24'726"E;
 - L a k e: a lake in the same area at 1480 m a.s.l., boggy meadow at brook mouth;
- Besides, some specimens were collected apart from the Reserve in the lower Bureya river basin:
- H y d r o p o s t: a hydrological station on the Bureya river bank at 51°08'N, 133°01'E;
 - C h e g d o m y n: Chegdomyn town on the Bureya river right tributary, 51°08'300"N, 133°01'259"E.

List of records

- *Coenagrion ecornutum* (Selys, 1872) - Chegdomyn: 21-VII-2005; 1 ♂ (I.L.).
 - *Coenagrion hylas* (Tryb om, 1889) - Strelka: a larch forest on a slope, 28-VII-2004, 1 ♀ (I.L.); an oxbow lake in a poplar forest on the Bureya river left bank at the Umalta-Makit brook mouth, 9-VIII-2004, 4 ♂ (I.L.).
 - *Coenagrion johanssoni* (Wallengren, 1894) - Strelka: an oxbow lake in a poplar forest on the Bureya river left bank at the Umalta-Makit brook mouth, 9-VIII-2004; 2 ♂ (I.L.)
 - *Enallagma cyathigerum* Charpentier, 1840 - Strelka: 27-VII-2004, 1 ♀ (V.D.).
 - *Aeshna crenata* Hagen, 1856 - Chegdomyn: 21-VII-2004, 1 ♂ (V.D.).
 - *Cordulia aenea* (Linnaeus, 1758) - Strelka: a peat-moss bogged larch forest, 27-VII-2005, 1 ♀ (I.L.).
 - *Epitheca bimaculata* (Charpentier, 1825) - Gorge: 22-VII-2005, 1 ♀ (I.L.).
 - *Somatochlora graeseri* Selys, 1887 - Strelka: an oxbow lake in a poplar forest on the Bureya river left bank at the Umalta-Makit brook mouth, 9-VIII-2004, 1 ♂ (I.L.).
 - *Somatochlora sahlbergi* Trybom, 1889 - Strelka: an oxbow lake in a poplar forest on the Bureya river left bank at the Umalta-Makit brook mouth, 9-VIII-2004, 2 ♂ (I.L.).
 - *Sympetrum danae* (Sulzer, 1776) - Strelka: 25-VII-2004, 1 ♂ (V.D.), larch forest on a slope, 28-VII-2004, 1 ♀ (I.L.), larch forest on bog, 5-VIII-2004, 1 ♀ (I.L.); - Pravaya Bureya: dwarf pine thickets on a slope, 28-VII-2005, 1 ♂ (I.L.); - Chegdomyn: 21-VII-2004, 1 ♂, 1 ♀ in copula, 13-VIII-2004, 1 ♀ (V.D.).
 - *Sympetrum flaveolum* (Linnaeus, 1758) - Hydropost: 24-VII-2004, 2 ♂ (V.D.); - Strelka: 25-VII-2004, 1 ♂ (V.D.); - Medvezhye: 17-VII-2005, 3 ♂ (I.L.); - Chegdomyn: 21-VII-2004, 1 ♂ (V.D.).
- Collectors are abbreviated as I.L. (I.I. Lyubchanskii) and V.D. (V.V. Dubatolov).

Discussion

The two season collecting yielded as little as 11 species, and this reflects the fact that the taiga-clad mountains in NE Asia are truly hos-

tile for dragonflies, first of all due to the shortage of stagnant water. Although the Bureinskii Reserve is situated only 360 km North of Khabarovsk where a rich palaeoarchaeartic (Manchurian) odonate fauna exists counting at least 41 species (MALIKOVA et al., 2007), the set of species collected here is exclusively boreal, they enjoy holartic, transpalaeartic or transsiberian ranges and all occur in Europe, at least on its Uralian border, at *Coenagrion ecornutum* and *Somatochlora graeseri*. Moreover, the list includes perhaps the generally most northern dragonfly species in the world, *Somatochlora sahlbergi*. However, this is not its southernmost known locality, for the species is flourishing on the Sokhondo Mt in southern Chita province, that is at about 49°40'-50'N, 110°00'-10'E, yet in severe subhighland conditions and about the tree line (DUBATOLOV et al., 2004: 85): "In the Sokhondo Nature Reserve occurs at Lake Bukukunskoe and small subhighland water bodies near it, as a rule attaining abundance of 3 individuals per 100 m of bank. However, on July 22, 1994 on a small [with the shoreline 80-140 m] terrace lake it reached 15 per 100 m. Occurs also on small moraine lakes downstream the Bukukun valley". These sites are situated within open subhighland larch stand at 1 600-1800 m a.s.l. In the same work, this species is also reported for Lake Utinoe (about 1800-2000 m a.s.l.) and the Zuravlinye lakes (in the cirque bottom above the tree line) on the same mountain. The dates are I-VII/11-VIII. All data by Dr E.A. Maksimenko.

We may conclude that in the Far East, the

palaeoarchaeartic fauna changes to boreal rather steeply with distance North from the Amur river valley, even within the water catchment basin of the latter. It is noteworthy that *C. ecornutum* was found as high as 1480 m a.s.l.; this fact, together with its discovery at Yakutsk (FUKUI, 1992) suggests that this is not a rather southern species as considered earlier (BELYSHEV, 1973). No doubt the list is very incomplete, and a long period of research is needed to complete the full checklist of species most of which are so scarce in this taigous mountainous area.

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ODONATA OF DINAGAT ISLAND, THE PHILIPPINES: UPDATED SPECIES LIST AND NOTES ON CONSERVATION OF SPECIES AND HABITATS

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Abstract – 69 spp. were recorded from the island in 2007-2008, raising the number of the known spp. up to 83, but 12 spp. from the 1997 list of M. Hämäläinen & R.A. Müller (*Odonatologica* 26: 249-315) were not recorded during the present survey. 7 spp. and 3 sites are con-

sidered important from conservation viewpoint.

Introduction

Dinagat Island is the third largest island in the Mindanao biogeographic sub-region. It is lo-