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**A new caddisfly from the Polish Tatras
with Siberian relatives:**

Apatania szczesnyorum (Trichoptera: Apataniidae)

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Twenty years ago, in August of 1986 I was holding a series of lectures with our Polish scientific counterparts on the nitrogen cycle of shallow waters. After completing my duties, I made a weeklong collection of caddisflies in the northern valleys of the Polish Tatras (West Tatras). While sweeping in *Carex* and *Juncus* canopies along and among a small stream-fed bog with my hand net just at the entrance of a small side valley in Dolina Chocholowska, I caught a single exemplar of a remarkable dark brown *Apatania* species with characteristic oily and smoky reflection. Describing this single male animal, I record for posterity of this rare or extinct creature, keeping in mind, as I have stated earlier (OLÁH, 1990), that our human duty of consciousness is to produce at least a "monument of description" for our living companions before we kill them.

Apatania szczesnyorum new species

The new species belongs to the *crassa* subgroup in the *complexa* species group of SCHMID (1955). The *crassa* subgroup with three known species populates a rather limited area. They live in the coastal and island region of the Okhotsk Sea in the Far East. *Complexa* species group is the most ancestral in the *Apatania* genus having the most complex genital structure even the median lobe on the dorsoapical area of the ninth segment is present. Among them, the *crassa* subgroup is the most derived one having the internal branch of the 10th segment reduced and the body of the 10th segment enlarged. In the *crassa* subgroup two species, *A. parvula* (MARTYNOV, 1935) and *A. crassa* SCHMID 1953, are very close with an enlarged, but almost undivided body of the 10th segment. The third known species *A. insularis* LEVANIDOVA 1979 has the body of the 10th segment divided into two very slender lobes indicating a more ancestral stage, at least according to the author of the species. However, it is difficult to detect which state of the body of 10th segment is ancestral and which is derived in this group, the divided or the undivided (Fig. 1: known members of the *crassa* subgroup from above: *A. parvula*, *A. crassa*, *A. insularis*, the divided state of the body of the 10th segment visible in coronal plane in dorsal view). The new species *A. szczesnyorum* is between them, the body of 10th segment is divided, but only its distal half and not into slender, but into rather stout lobes. At the same time as a unique structural evolution, the median process of the 9th segment is partially fused to the body of the 10th segment. It looks like being a process on the 10th and not on the 9th segment as MARTYNOV (1935) stated originally, when explaining this particular structural unit present in ancestral *Apatania*.

Male: Body dark brown; legs, antennae and palps as well as warts on head and thorax paler, almost ochraceous. Forewing membrane light brown with flavous uniformly distributed dense pilosity; pterostigma corneous almost slightly leathery; there are androconial hairs lined in 2-3 irregular rows with closely packed, short and black hairs underside of vein R1 from the crossvein cutting off the vein Sc nearly to the base.

Forks on forewing sessile except Fork 3 with short stalk. Forewing 7,3, hindwing 6,1 mm.

Male genitalia (Fig. 2): The ring of the 9th segment evenly short, even its tergum is not so shortened as in the other members of the subgroup. Characteristically there are only 2-3 setae on the posterior margin of the segment on the sternal position on the inferior appendages. 10th segment well developed, broad in dorsal and long in lateral views and subdivided into two broad triangular lobes as visible in dorsal view. The median process described by SCHMID (1953) as the lobe of the 9th segment is fused to the body of the 10th segment, only its distal half is free, forming a trifid apex in dorsal view, but visible as only bifid in lateral view. There is a well-sclerotized anterior extension on the ventroanterior corner, penetrating deep into the ninth segment. The two-jointed inferior appendages are the second largest sized component of the genitalia and directed almost straight backwards. The basal segment or coxopodit is stout almost quadrangular in lateral aspect with a very convex outer surface and a concave inner surface producing a parallel-sided mesad curving shape in the ventral view. Proximally the median sides of their sclerites are continuous, but a basal plate is not visible, also the sclerotic rod connecting the laterodorsal margin of the inferior appendage with the sclerite of phallocrypt is hardly visible. The dorsal side of the harpago, the second segment of the inferior appendages almost twice longer than the ventral side producing a falciform-excised apex, differentiates the species from the other three known species in the subgroup. Phallic apparatus being the largest component of the genitalia starts with less sclerotized, broad and bellied phalloteca constricted basad into a phallic-apodeme. Phallocrypt very deep penetrating well into the eighth segment and reinforced with two lateral slightly sclerotized bands forming a sclerotized connection with the upper inner angle of inferior appendages. Endotheca well developed. The styliform paramers with slightly crossing apex; the aedeagus slightly S-forming in lateral view with excised bifid apex in ventral view.

Holotype male: Poland, Polish Tatras, Chocholowska Valley, 22.8.1986, net leg. J. Oláh, in my collection.

Habitat. The adult was resting on the *Carex* canopy in a small stream-fed bog at the entrance of a side valley in the middle section of Dolina Chocholowska. This small bog was maintained by the tributary of the side valley. The stream water was spreading and ending in this bog. This rare animal was accompanied by *Apatania fimbriata* PICTET, which is an abundant species living in larger streams and small tributaries of the whole Tatras. In this valley, it just took a few minutes of sweeping effort to collect 27 males.

Distribution: The cool-adapted *complexa* species group is holarctic with a distributional center in the North Pacific including Central China, Baikal region, Ussuriland, Amurland, Sachalin, Shantar Island, Kuril Islands, Japan and with four species in the Northwest Region of North America. The *crassa* subgroup with its three known species populates the coastal areas and islands of Okhotsk Sea. *A. crassa*: Hokkaido; *A. parvula*: Shantar Island., Kuril Islands, Sachalin Island, Lower Amurland; *A. insularis*: Kunasir Island. The new species, as the fourth member of the *crassa* subgroup, was collected in a northern valley of the Polish Tatras.

Etymology. Named in the honor of Dr. Bronisław Szczesny and his family in memory of his Polish soup and his method of refreshing the deep frozen bread when we met during the heroic period of Solidarność, when the holotype of this new species was collected.

Acknowledgement. I am thankful to Prof. Hans Malicky for his kindness in receiving me with this single specimen and for inspiring me to describe it.

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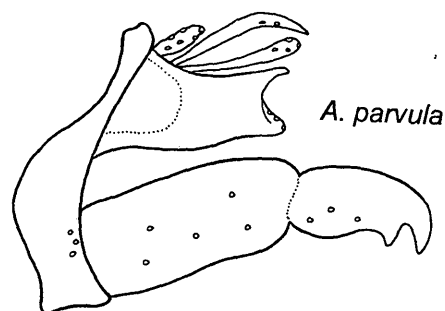
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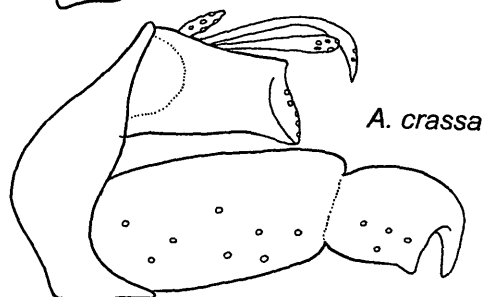
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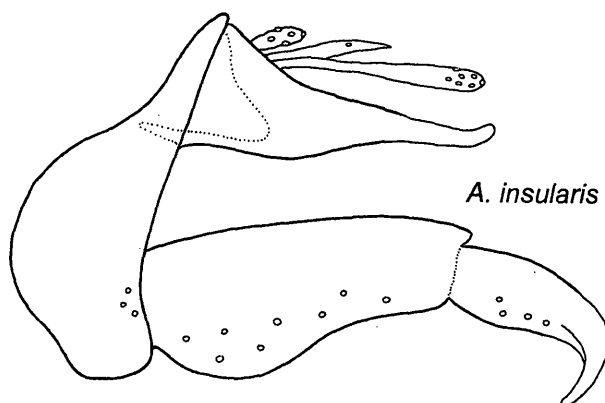
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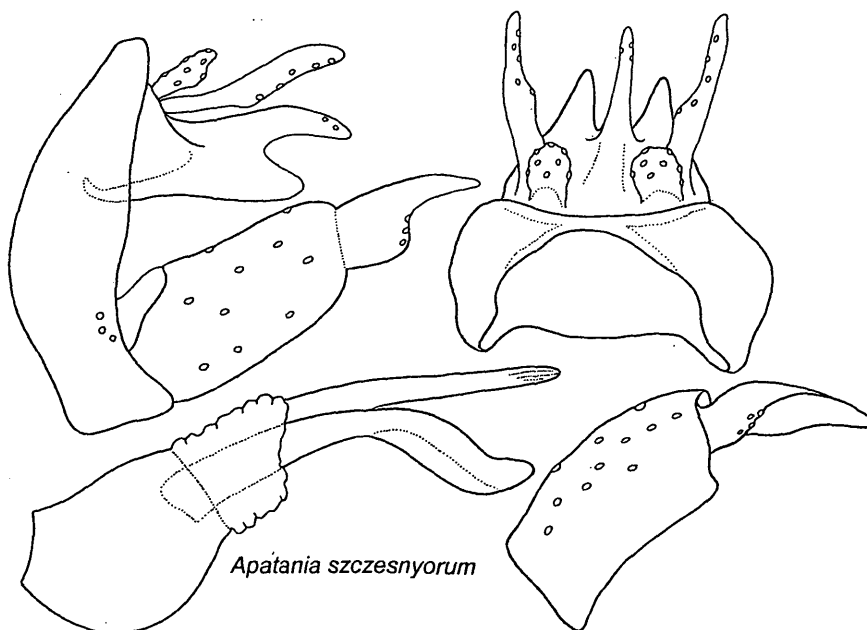
A. parvula



A. crassa



A. insularis



Apatania szczesnyorum

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