

Genus	Vol. 3(4): 233-242	Wrocław, 15 IX 1992
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*Abrolophus strojnyi* sp. n. from Poland  
(Acari: Actinedida: Erythraeidae)

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ABSTRACT. *Abrolophus strojnyi* sp. n. is described and illustrated.

Approximately, 100 species of the genus *Abrolophus* BERLESE, 1891 s. SOUTHCOTT (1961a) have been described hitherto and among them, 57 (nominal!) are Palearctic species. The genus needs to be revised basing on type material because most of the descriptions are insufficient for proper interpretation of species. There exist several species-groups within the genus and one of them is the "*passerini*" group. It comprises three species: *A. passerini* (BERLESE, 1904), *A. halberti* (COOREMAN, 1946) and *A. strojnyi* sp. n. These species are characterized by strongly pinnate and relatively short dorsal and ventral setae, crista metopica with rounded sensillary area and more or less pinnate nonsensillary setae AL, and bare and little sclerotized anus.

The terminology in the present work is after SOUTHCOTT (1960, 1961a, b, c, 1963, 1986 and later) and GABRYŚ (1992a, b). Dimensions of holotype and some paratypes are given in table (the codes correspond to the slides in author's collection).

*Abrolophus strojnyi* sp. n.

TYPE MATERIAL

Holotype - PL/PR/4/1, collected 13 June 1987, Płazowska Góra near Narol (Przemyśl province), mesoxerothermic flora on limestone, coll. G. GABRYŚ, sift-out, slide, mounted in Faure - Berlese liquid, in author's collection; 9 paratypes (2M, 5F, 2 nymphs) collected in several localities in Poland, in author's collection. One paratype is deposited in Acarology Laboratory, Museum of Biological Diversity, Ohio

Tab. Dimensions of *Abrolophus strojnyi* (all in  $\mu\text{m}$ ). Additional explanations in the text

Characters	Male WR/33 /3	Male WR/47/3	Female PR/4/1 (holotype)	Female KA/6/24	Female KI/55/1	Female WR/29/1	Nymph ZA/33/2	Nymph ZA/33/3
	1	2	3	4	5	6	7	8
LB	1048	-	924	1093	878	1032	785	755
WB	585	-	570	678	585	631	450	431
ASRo	164	-	104	123	224	112	-	-
PSG	265	-	256	292	118	272	-	-
GAn	36	48	22	47	26	32	-	-
GOp	292	285	210	335	208	316	-	-
AnOp	217	192	158	237	142	237	-	-
MDS	25-32	20-30	18-22	20-30	20-28	18-32	20-26	18-26
PDS	30-36	25-35	20-26	25-32	26-30	26-32	26-32	28-32
MVS	20-28	18-24	18-20	22-25	18-22	18-26	14-22	14-20
PVS	28-30	20-25	18-20	20-24	20-25	20-25	18-22	20-24
AL (n)	3	3	3	3	3	4	2	2
AL	$\pm 24$	28-30	30	34-36	34-40	34	30	28
ASens	60	$\pm 56$	64	64	60	60	44	40
PSens	74	70	80	75	84	80	65	58
CML	188	170	196	194	170	192	135	126
CMW	4-12	6-10	6-10	6-10	6-10	6-12	2-6	2-6
ASAL	60	52	60	67	53	65	48	42
ASAW	50	44	47	47	46	53	45	42
PSAL	50	42	43	49	43	50	34	30
PSAW	48	36	43	39	40	45	34	28
ISD	140	130	146	144	120	142	97	95
SBa	18	14	18	16	15	17	14	15
SBp	17	12	19	15	16	14	11	14
ASBa	36	30	40	38	37	38	30	24
PSBp	12	10	10	11	13	12	8	7
OCM	107	103	91	109	103	109	82	65
OAS	115	118	134	104	86	130	89	93
OPS	25	12	12	40	34	12	8	2
O	38	25-30	28	26	24	24	16	15
O-O	214	206	182	218	206	218	164	130
ExG (L)	186	158	190	197	208	192	-	-
ExGLa(L)	28-32	28	16-18	-	-	16-18	-	-
An (L)	40	42	48	53	40	45	44	?
AnLa (n)	0	0	0	0	0	0	0	0
prCxIII(L)	30-36	34	30	$\pm 40$	36	38	24	24
Palps:								
PaFe (W)	61	61	69	67	61	67	51	49
PaGe(W)	53	49	57	59	57	57	41	41
PaTi (W)	40	37	41	44	41	41	31	30
PaTa (L)	24	22	32	34	34	30	24	24
PaTa (W)	18	20	32	34	34	28	22	22
PaTr (L)	30	30	32	32	30	34	24	18
PaFe (L)	59	59	57	65	62	62	45	34
PaGe (L)	45	43	45	48	49	44	30	34
PaTi (L)	16	18	18	18	18	18	14	14
PaTiCl(L)	16	20	22	22	20	20	16	16
L	166	170	174	185	179	178	129	116

Table (continued)

	1	2	3	4	5	6	7	8
<b>Legs (L)</b>								
<b>I</b>								
Cx	150	146	150	146	158	154	102	107
Tr	55	43	47	55	55	40	40	32
Bf	71	63	67	71	67	59	47	43
Tf	95	87	91	87	91	99	67	60
Ge	111	110	114	118	126	114	79	83
Ti	111	107	111	114	112	111	75	71
Ta	130	126	122	122	130	130	83	79
Ta (H)	71	71	75	79	75	79	51	53
L	723	682	702	713	739	707	493	475
<b>II</b>								
Cx	118	110	111	118	134	118	91	89
Tr	39	36	40	43	47	39	32	24
Bf	39	43	43	47	47	37	32	32
Tf	55	55	51	67	59	59	40	36
Ge	67	67	71	83	71	75	55	43
Ti	75	79	79	83	79	83	60	51
Ta	71	71	71	67	71	75	51	51
Ta (H)	43	39	48	47	47	47	33	35
L	464	461	466	508	508	486	361	326
<b>III</b>								
Cx	95	91	95	102	83	99	67	71
Tr	40	40	47	43	40	47	24	28
Bf	40	43	40	51	40	39	32	32
Tf	59	59	59	63	71	55	40	40
Ge	75	79	79	79	87	79	59	59
Ti	87	87	90	75	99	95	61	63
Ta	63	67	67	67	70	71	51	47
Ta (H)	40	39	47	47	44	44	32	32
L	459	466	477	480	490	485	334	340
<b>IV</b>								
Cx	154	146	166	150	158	158	91	105
Tr	55	50	51	43	51	55	35	28
Bf	55	55	55	63	59	55	47	35
Tf	99	91	87	98	95	87	63	59
Ge	111	111	114	114	114	114	87	79
Ti	122	118	126	122	126	122	87	83
Ta	67	71	67	79	70	75	49	47
Ta (H)	43	39	47	47	43	47	32	29
L	663	642	666	669	673	666	459	436
<b>IP</b>	<b>2309</b>	<b>2251</b>	<b>2311</b>	<b>2370</b>	<b>2410</b>	<b>2344</b>	<b>1647</b>	<b>1577</b>

State University, Columbus, USA and one in Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Germany.

DIAGNOSIS: (dimensions given in table)

Female: medium size (870-1100 $\mu$ m long, 570-680 $\mu$ m wide), dorsal and ventral sides of idiosoma densely covered with pinnate, short setae which are somewhat "membranous" at the end of opisthosoma (figs. 1-5); palps short, very wide, palptibia triangular, unusually short, always at least twice wider than long, palptarsus more or less as long as wide (figs. 11, 12); crista metopica relatively short (fig. 1), strong, posterior sensillary area always lacking posterior process, anterior sensillary area rounded anteriorly and strongly sclerotized laterally (fig. 7); sensillary setae ASens (fig. 8) always shorter than PSens (fig. 9), number of AL (fig. 10) constant - 3 (exceptionally 4), AL always considerably shorter than PSens, strong, bare; anus little sclerotized, bare (figs. 15, 16); coxalae III short (30-40 $\mu$ m)(fig. 6).

Male: body shape and structure like in female; "penis" (i.e. internal genital sclerite) strongly sclerotized, valves slightly narrower than in female (fig. 16).

Nymph: body shape and structure similar to adult, smaller, dorsal setae slightly slimmer, number of nonsensillary setae AL smaller (usually 2).

*A. strojnyi* sp. n. differs from *A. halberti* in slightly smaller body size, very stumpy palps with femur as wide as long, genu always wider than long, tibia more than twice wider than long and tarsus as wide as long; ASens always far shorter than PSens (in *A. halberti* from Lebanon ASens is as long as PSens like in *A. passerini* - as in fig II/7 [COOREMAN, 1946]), considerably shorter crista metopica, nonsensillary setae AL always less numerous and not similar to idiosomal setae, wider posterior sensillary area, lacking posterior process of crista metopica, much shorter legs.

*A. strojnyi* sp. n. differs from *A. passerini* in much smaller body, structure of palps, especially palptibia which is triangular, unusually shortened and always over twice wider than long (in *A. passerini* the ratio never exceeds 1.4:1); structure of dorsal setae which are slightly "membranous" towards posterior body part (in *A. passerini*, they are similar to medial ones [MDo]); crista metopica shorter and of slightly different appearance, always without posterior process; constant number of nonsensillary setae AL which are shorter than in *A. passerini*; ASens always shorter than PSens (in *A. passerini* ASens are equal to PSens); much shorter legs, palps, coxalae III and other dimensions.

DESCRIPTION: (basing on holotype, supplemented with data of paratypes).

Female. Body oval, reddish in lifetime, densely covered with pinnate setae on dorsal as well as ventral side, legs proportional, relatively strong, considerably shorter than body, I the longest, IV slightly shorter and II and III the shortest, more or less equal in length, epimera well shaped, coxalae short (fig. 1).

Gnathosoma: rostrum elongate, scarcely covered with setae, chelicerae typical, dagger-like, retractable into idiosoma (fig. 7). Palps very short and wide with

remarkable unusually short and wide palptibia terminated with normal claw and also short and wide, semispherical palptarsus dilated basally; all palp articles covered with smooth or slightly pinnate setae, palptarsus with numerous solenidia; proximal-ventral side of palpgenu with strongly sclerotized cavity (figs. 11, 12).

Dorsal side: border between aspidosoma and opisthosoma obscure; dorsal setae almost uniform in length, all strongly pinnate and the relatively long setulae (6-12 of them) arise along the whole length of main rod (figs. 2, 3), some setae become somewhat "membranous" posterad. Crista metopica strong, short, strongly sclerotized at edges, anterior sensillary area rhomboidal in outline and anterior part more elongate, slightly rounded anteriorly and laterally; posterior sensillary area "bulbous", lacking posterior process; rod relatively wide, the narrowest in mid part (fig. 7); cavities (bothridia) with sensillary setae ASens and PSens relatively large, ASens and PSens slender, slightly setulose apically, ASens always shorter than PSens (figs. 8, 9); nonsensillary setae AL (usually 3, exclusively 4) strong, short, with adherent setulae, much shorter than ASens (fig. 10). Eyes big, sessile, situated at both sides of crista metopica posterior sensillary area (fig. 7).

Ventral side: anterior part up to posterior edge of genital opening covered with uniform, short, pinnate setae of different structure than dorsal ones; setulae arise at and slightly above the base of rod, the basalmost setulae are the strongest ones and more bent outwards to form a kind of a "paint-brush" (fig. 4); in some specimens, the anterior part of podosoma with long (ca.  $40\mu\text{m}$ ), single, spiniform, smooth setae; setae at posterior end of ventral part of opisthosoma similar in shape and structure to respective ones on dorsal part (fig. 5). Genital opening elongate, border between genital sclerite (g.s) and para-genital sclerite (p.g.s.) indistinct, anterior and posterior article of g.s. and p.g.s. well shaped, labialae of both valves similar, spiniform, smooth or slightly setulose, more or less as long as ventral setae; anus weakly sclerotized, bare (fig. 15).

Legs: typical, proportional (see general description), covered with setae of different types (scobalae, tactalae, solenidia - these particularly numerous on tarsi); all tarsi with characteristic "brush" on ventral side and with two claws on stalks; tarsi I considerably bigger than remaining ones, II-IV almost of the same size, small, almost spherical (figs. 13, 14). Ti I shorter than Ge I, famulus conical ( $7\mu\text{m}$ ), situated in posterodorsodistal part of Ta I, vestigialae arranged as follows (always in dorsodistal parts): Ti I ( $18\mu\text{m}$ ), Ge I ( $11\mu\text{m}$ ), Ge II ( $8\mu\text{m}$ ).

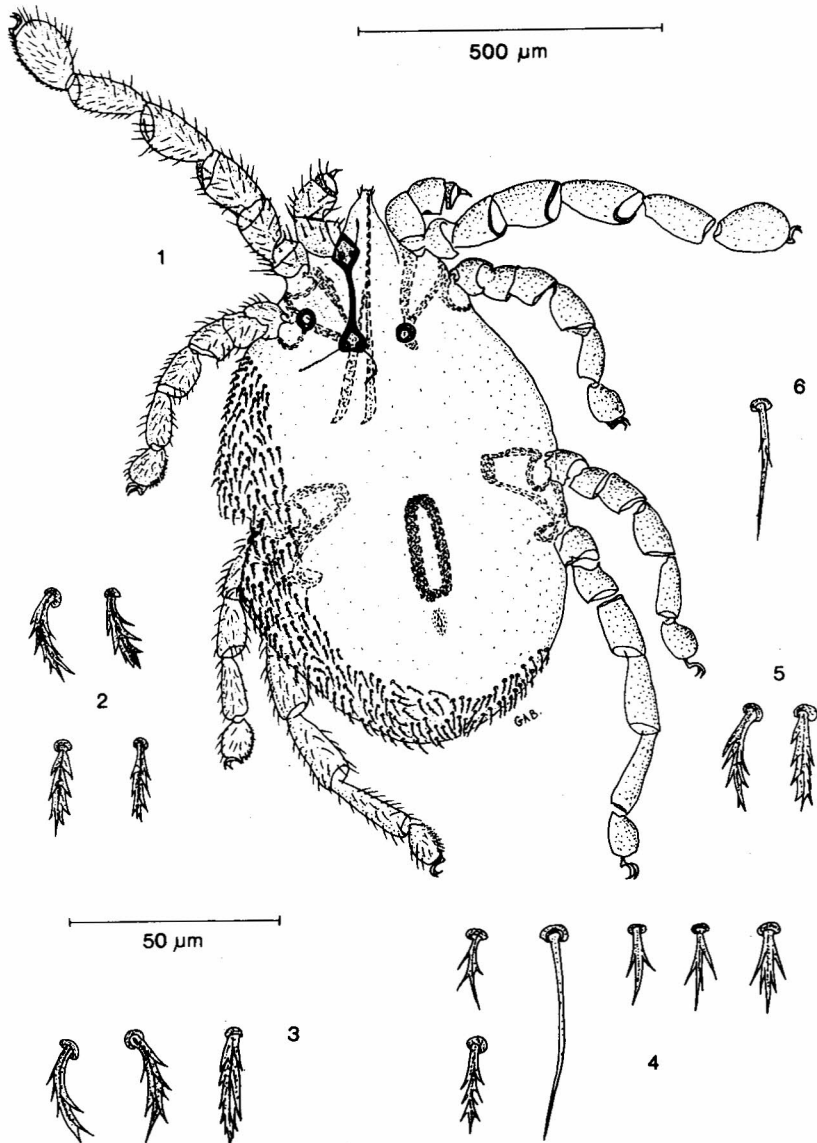
Male. See the diagnosis.

Nymph. See the diagnosis.

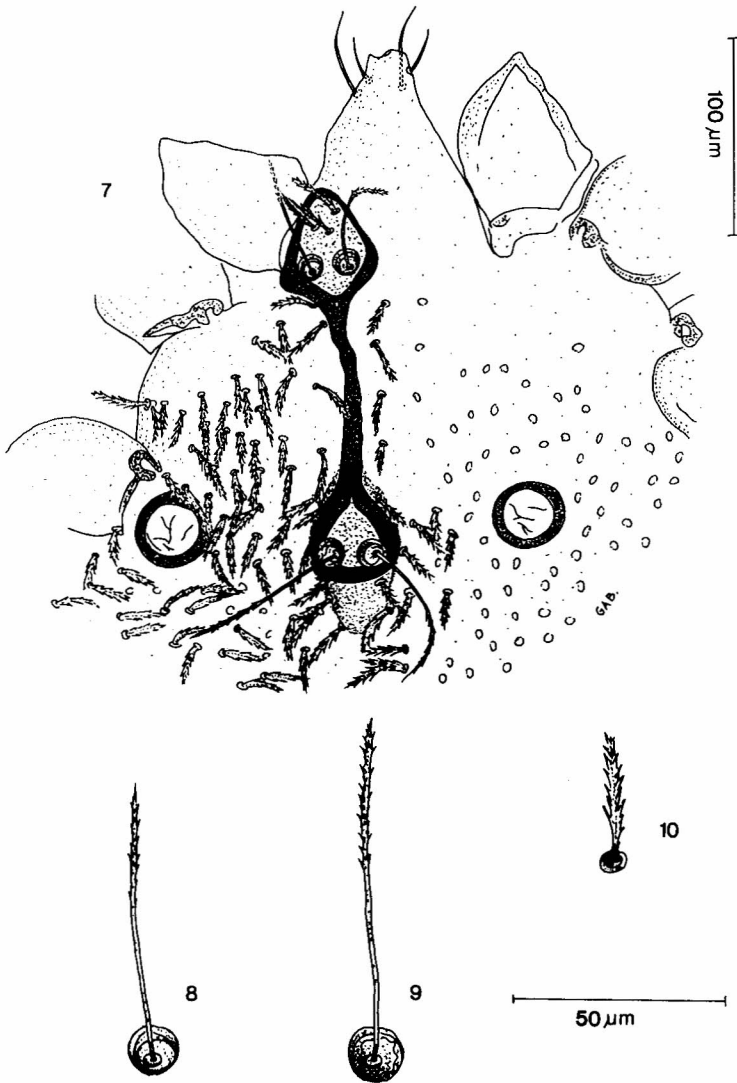
Etymology. This species is dedicated to the outstanding Polish entomologist, professor Władysław STROJNY.

#### LOCALITIES

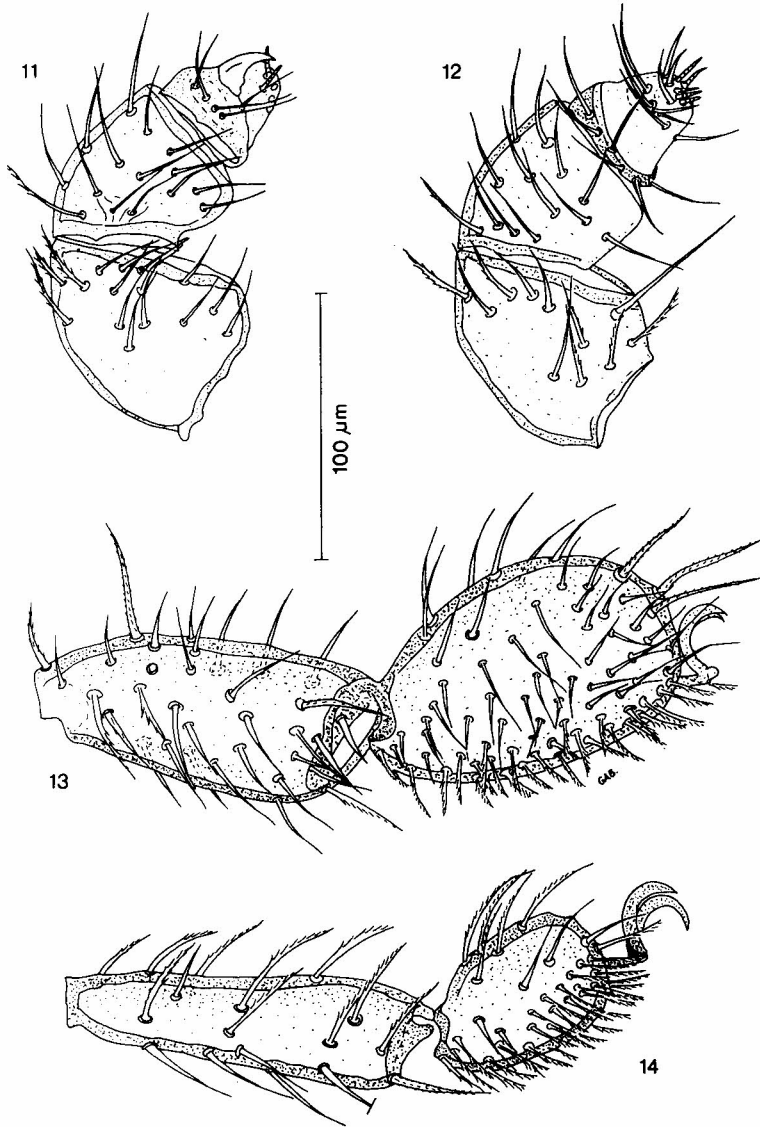
1. Wrocław: Księża Małe - water-bearing areas, lake outwash, 10.V.1984, coll. L. BOROWIEC, 1F; 16.V.1984, as above, 1M; Wojnów - border between meadow and



1-6. *Abrolophus strojni* (- holotype); 1 - general view, 2 - middorsal setae (Mdo), 3 - postdorsal setae (PDo), 4 - midventral setae (MVe), 5 - postventral setae (PVe), 6 - proximal coxala III

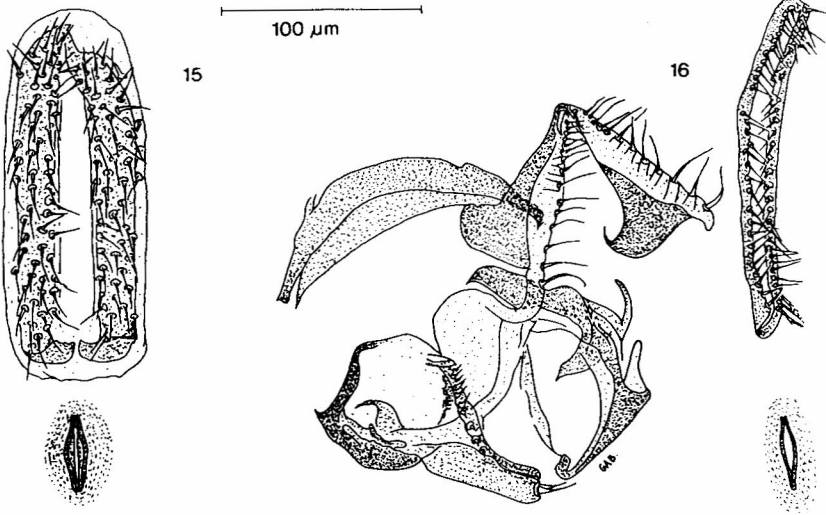


7-10. *Abrolophus strojni* (- holotype); 7 - crista metopica region, 8 - Asens seta, 9 - Psens seta, 10 - AL seta

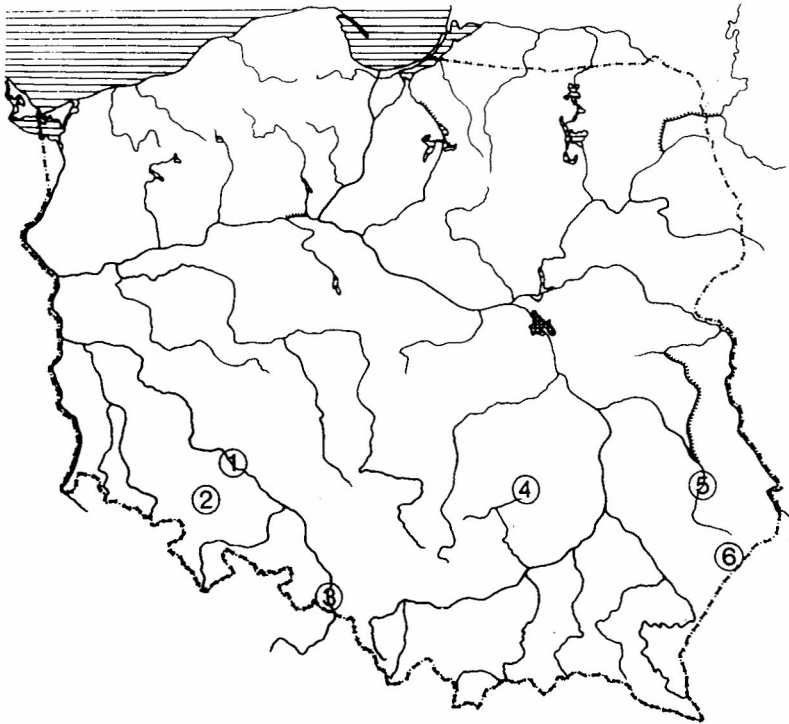


11-14. *Abrolophus strojnii* (- holotype); 11 - left palp (medially), 12 - left palp (laterally), 13 - right tarsus I and tibia I (posteriorly), 14 - right tarsus IV and tibia IV (posteriorly)





15-16. *Abrolophus strojnyi*; 15 - genital-anal region of the female (holotype), 16 - genital-anal region of the male with internal genital sclerite



Map. Localities of *Abrolophus strojnyi* in Poland. Numerals correspond to the list in the text.

ploughed field, 3.VI.1984, coll. L. BOROWIEC, 1M. 2. Mt. Radunia near Sobótka: Reserve "Sulistrowickie Meadows", meadow, 21.V.1985, coll. G. GABRYŚ, 2F. 3. Reserve "Łęczak" near Nędza: sedge meadow, turf, 20.V.1984, coll. G. GABRYŚ, 2F. 4. Świętokrzyskie Mts.: Reserve "Bielnik", section 114, clearing NE from cloister on Święty Krzyż, *Arrhenatheretum medioeuropaeum*, 21.IX.1982, coll. A. KAŹMIERSKI and J. FISZER, 2F. 5. Tarnogóra near Izbica: xerothermic meadow on Wieprz river, 26.VII.1987, coll. L. BOROWIEC and D. IWAN, (2 nymphs). 6. Płazowska Góra near Narol: mesoxerothermic meadow on limestone, 13.VI.1987, coll. G. GABRYŚ, 1F - holotype).

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