

NEW DATA ON DISCOMYCETES FROM THE KOMSOMOLSKY NATURE RESERVE (Khabarovsk Territory, Russia)

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The areas on the left bank of the Amur River were explored in July 2022. The purpose of the work was to reveal the discomycete species diversity in cedar-broadleaf and southern broadleaf forests at their northern border. The specimens were collected from wood and herbaceous remnants, soil and animal excrements. In total, 35 discomycete species from 16 families and six orders of the *Pezizomycotina*, *Ascomycota* were revealed. Some species (*Ascobolus crenulatus*, *Calycellina separabilis*, *Hymenoscyphus epiphyllus*, *Scutellinia macrospora*, *Tapesia cinerella*, and *Tympanis piceae*) were recorded in the Russian Far East for the first time. *Mollisia subcorticalis* was found for the first time on the mainland of the region, before it was known from the territory of the Sakhalin Island only.

Keywords: Amur River basin, biodiversity, fungal distribution, new records, Russia

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INTRODUCTION

The study area belongs to the Amur River basin with its tributaries, which occupies the bulk of the southern part of the Russian Far East and includes almost the entire range of the temperate zone of East Asia landscapes. This scope makes it possible to study fungal-vegetation relationships at a broad regional level. The overall idea of the study was to fill a significant gap in knowledge about the discomycete fungi diversity of pine-broadleaf forests at their northern border.

The pine-broadleaf forests in the south of the Khabarovsk Territory are usually considered to be somewhat depleted analogues of pre-glacial Eurasian forests at the area from the Pacific Ocean to the East European Plain. Previously, similar studies were carried out in the 1980s when only five discomycete species: *Gyromitra gigas*, *Helvella pulla*, *Microstoma floccosum* (as *Anthopeziza floccosa*), *Mitrula paludosa* (as *M. phalloides*), and *Spathularia flavida* were discovered (Azbukina, 1989).

MATERIALS AND METHODS

We studied the discomycete diversity on the southern border of the Komsomolsky State Nature Reserve in the lower reaches of the Gorin river in the coastal watershed of the Ambarny and Kamensky creeks in July 2022. The territory is noteworthy with its location in the northern

part of the unique Sikhote-Alin mountain system on the northern border of the Amur-Ussuri vegetation.

Whenever possible, photographs were taken of fresh specimens to document ascomata and substrates natural coloration (Nikon D5100). Fungal structures such as apothecia, asci, ascospores, hairs were mounted in lactophenol cotton blue and measured using a compound microscope (Nikon Eclipse F200). Morphological characteristics such as ascomata features, ascospores, asci, paraphyses, and hairs' dimensions were used to identify and characterize specimens. Macromorphological examination and photography were carried out on fresh specimens within three days of collection. Micromorphological examination of fresh specimens was carried out with distilled water as slide mount. Measurements and photographs of ascospores, asci, paraphyses and hairs were taken and recorded. Dimensions of important morphological structures such as length and width were obtained from 20–50 observations, and variability was calculated using standard deviation (with absolute minimums and maximums in parentheses and means $\pm$ standard deviation). Specimens were dried in air or in an electric food dryer (50–55 °C) overnight and deposited in the VLA [Far Eastern Regional Herbarium of the Federal Scientific Center for Terrestrial Biodiversity of East Asia, Far Eastern Branch of the Russian Academy of Sciences (VLA)] for further study. Names of taxa are updated in accordance

with the Index Fungorum database (2023). The Global Biodiversity Information Facility (GBIF, 2023) was used as an important source of information on species distribution.

RESULTS

Identification of the collected specimens added 35 discomycete species to the mycobiota of the region studied. Since the material collection was carried out in the summer, we did not find previously mentioned species (Azbukina, 1989). All these five species are saprotrophic discomycetes that form ascomata in the forest litter.

An annotated species list follows below.

Pezizomycotina *Dothideomycetes* *Rhizodiscinaceae*

Rhizodiscina lignyota (Fr.) Hafellner — on dead wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4572.

Distribution in the Russian Far East: Primorsky Territory — Khasansky district (VLA D-1975, VLA D-1986, VLA D-1987); Lazovsky district (VLA D-1194, VLA D-1195).

Leotiomycetes *Leotiomycetidae* *Helotiales* *Cenangiaceae*

Chlorenchocelia versiformis (Pers.) J.R. Dixon — on dead wood of broad-leaved tree species, 50 44,651'N, 137 22,854'E, VLA D-4562.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-2091); Shkotovsky district (VLA D-145, VLA D-1918); Khasansky district (VLA D-1974, VLA D-3798); Ussuriysky district (VLA D-143, VLA D-147, VLA D-151, VLA D-156, VLA D-1830, VLA D-1841, VLA D-3799); Krasnoarmeysky district (VLA D-3862, VLA D-3412, VLA D-3567); Lazovsky district (VLA D-142, VLA D-144, VLA D-148, VLA D-149, VLA D-152, VLA D-153, VLA D-155, VLA D-809, VLA D-1689, VLA D-1695); Terneysky district (VLA D-150, VLA D-154, VLA D-3750); Jewish Autonomous Region (VLA D-1785, VLA D-1814); Khabarovsk Territory — Khabarovsk district (VLA D-4350); Komsomolsky district (VLA D-4231); Sovetsko-Gavansky district (VLA D-3082); Sakhalin Region (VLA D-3321, VLA D-4018, VLA D-2078).

Chlorociboriaceae

Chlorociboria aeruginascens (Nyl.) Kanouse — on dead wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4561.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-113, VLA D-2086, VLA D-2088, VLA D-4157); Shkotovsky district (VLA D-112, VLA D-114, VLA D-116); Khasansky district (VLA D-110, VLA D-111, VLA D-3452); Ussuriysky district (VLA D-108, VLA D-115, VLA D-117, VLA D-118, VLA D-119, VLA D-1730); Krasnoarmeysky district (VLA D-3842, VLA D-3901, VLA D-3938, VLA D-3939); Lazovsky district (VLA D-105, VLA D-107, VLA D-109, VLA D-1564, VLA D-1694, VLA D-2000); Terneysky district (VLA D-134, VLA D-1904, VLA D-3746, VLA D-3747, VLA D-3768); Khabarovsk Territory — Khabarovsk district (VLA D-2793, VLA D-2799, VLA D-2824, VLA D-2937, VLA D-4349); Komsomolsky district (VLA D-4230); Nanaisky district (VLA D-3585, VLA D-3648); Tuguro-Chumikansky district (VLA D-4247); Sakhalin Region (VLA D-106, VLA D-120, VLA D-1651, VLA D-3322, VLA D-4426).

Helotiaceae

Hymenoscyphus epiphyllus (Pers.) Rehm ex Kauffman (Fig. 1). — in litter on fallen leaves of *Alnus* sp., 50 44,651'N, 137 22,854'E, VLA D-4591, VLA D-4595; on fallen leaves of *Padus* sp., 50 43,691'N, 137 23,279'E, VLA D-4590.

Note. New for Russian Far East.

H. fraxineus (T. Kowalski) Baral, Queloz et Hosoya — in litter on fallen leaves of *Fraxinus* sp., 50 43,691'N, 137 23,279'E, VLA D-4592.

Distribution in the Russian Far East: Primorsky Territory — Shkotovsky district (VLA D-4425); Krasnoarmeysky district (VLA D-3393, VLA D-3846); Khabarovsk Territory — Khabarovsk district (VLA D-2798); Komsomolsky district (VLA D-4238).

Godroniaceae

Ascocalyx abietis Naumov — on twigs of *Abies* sp., 50 44,651'N, 137 22,854'E, VLA D-4604.

Distribution in the Russian Far East: Khabarovsk Territory — Sovetsko-Gavansky district (VLA D-3814, VLA D-4200, VLA D-4201, VLA D-4202).

Lachnaceae

Incrucipulum ciliare (Schr. ex J.F. Gmel.) Baral — in litter on fallen oak leaves, 50 44,086'N, 137 23,576'E, VLA D-4556, VLA D-4594.

Distribution in the Russian Far East: Primorsky Territory — Ussuriysky district (VLA D-215); Jewish Autonomous Region (VLA D-2519); Khabarovsk Territory — Khabarovsk district (VLA D-2895, VLA D-2913), Solnechnyi district (VLA D-3682, VLA D-3162, VLA D-4387).

Lachnellula fuckelii (Bres. ex Rehm) Dharne — on twigs of *Larix* sp., 50 44,087'N, 137 24,734'E, VLA D-4550.

Distribution in the Russian Far East: Primorsky Territory — Partizansky district (VLA D-672, VLA D-671), Shkotovsky district (Raitviir, 1991); Khabarovsk Territory — Khabarovsk district (VLA D-4207); Sakhalin Region (VLA D-3687).

L. resinaria (Cooke et W. Phillips) Rehm — on twigs of *Larix* sp., 50 44,086'N, 137 23,576'E, VLA D-4551.

Distribution in the Russian Far East: Primorsky Territory — Terneysky district (VLA D-688, VLA D-3786); Khabarovsk Territory — Sovetsko-Gavansky district (VLA D-3050, VLA D-3051, VLA D-4205, VLA D-4206), Tuguro-Chumikansky district (VLA D-4264, VLA D-4273, VLA D-4309), Vaninsky district (VLA D-3965, VLA D-4003); Magadan region (VLA D-684, VLA D-685); Sakhalin Region (VLA D-584, VLA D-686, VLA D-687).

L. suecica (de Bary ex Fuckel) Nannf. — on twigs of *Larix* sp., 50 44,086'N, 137 23,576'E, VLA D-4553.

Distribution in the Russian Far East: Primorsky Territory — Khasansky district (D-1947); Khabarovsk Territory — Ayano-Maisky district (VLA D-316, VLA D-1339, VLA D-1347, VLA D-4272), Sovetsko-Gavansky district (VLA D-2999, VLA D-3047, VLA D-3048, VLA D-3049); Vaninsky district (VLA D-3973, VLA D-3979, VLA D-3997); Magadan Region (VLA D-645, VLA D-3699, VLA D-3704, VLA D-3707, VLA D-3720); Chukotka Autonomous Okrug (VLA D-2942, VLA D-3705); Sakhalin Region (VLA D-639, VLA D-640,



Fig. 1. *Hymenoscyphus epiphyllus* on the veins of fallen leaves.

VLA D-641, VLA D-642, VLA D-643, VLA D-644, VLA D-646, VLA D-647, VLA D-648, VLA D-649, VLA D-650, VLA D-651, VLA D-652, VLA D-653, VLA D-2374, VLA D-2459, VLA D-2464, VLA D-2510, VLA D-2530, VLA D-2538); Kamchatka Territory (VLA D-3146).

Lachnum papyraceum (P. Karst.) P. Karst. — on dry stems of *Sambucus* sp., 50 43,691'N, 137 23,279'E, VLA D-4552.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-734); Khabarovsk Territory — Khabarovsk district (VLA D-2914), Sovetsko-Gavansky district (VLA D-3046), Vaninsky district (VLA D-3994, VLA D-4004); Sakhalin Region (VLA D-733, VLA D-1561, VLA D-2471, VLA D-4514).

L. virgineum (Batsch) P. Karst. — in litter on dry stems of *Spiraea* sp., 50 44,087'N, 137 24,734'E, VLA D-4555; 50 43,691'N, 137 23,279'E, VLA D-4554; on dry stems of *Sambucus* sp., 50 43,691'N, 137 23,279'E, VLA D-4549.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-707, VLA D-4114), Lazovsky district (VLA D-705, VLA D-712); Khabarovsk Territory — Khabarovsk district (VLA D-2864, VLA D-2901, VLA D-2905, VLA D-2906, VLA D-2916, VLA D-2919, VLA D-4463), Polina Osipenko district (VLA D-4064), Vaninsky district (VLA D-3995); Sakhalin Region (VLA D-228, VLA D-229, VLA D-230, VLA D-231, VLA D-232, VLA D-233, VLA D-234, VLA D-706, VLA D-709, VLA D-710, VLA D-711, VLA D-2255, VLA D-2270, VLA D-2283, VLA D-2383, VLA D-2387, VLA D-2469, VLA D-3173, VLA D-3186, VLA D-3202, VLA D-3435).

Mollisiaceae

Mollisia caespiticia (P. Karst.) P. Karst. — in litter on bark of *Alnus* sp., 50 44,087'N, 137 24,734'E, VLA D-4581; on dead wood of *Alnus* sp., together with *Rhizodiscina lignyota* (Fr.) Hafellner and *Orbilina xanthostigma* (Fr.) Fr., 50 43,691'N, 137 23,279'E, VLA D-4572.

Distribution in the Russian Far East: Primorsky Territory — Lazovsky district (VLA D-828), Terneysky district (VLA D-829); Khabarovsk Territory — Khabarovsk district (VLA D-2899), Sovetsko-Gavansky district (VLA D-3035); Sakhalin Region (VLA D-3810).

M. cinerea (Batsch) P. Karst. — in litter on wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4586.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-873, VLA D-874, VLA D-875), Khasansky district (VLA D-2002), Krasnoarmeysky district (VLA D-3407, VLA D-3897, VLA D-3911), Lazovsky district (VLA D-882, VLA D-885, VLA D-886, VLA D-887, VLA D-1992, VLA D-1995, VLA D-1996), Terneysky district (VLA D-876, VLA D-877, VLA D-878, VLA D-879, VLA D-880, VLA D-884, VLA D-3787); Khabarovsk Territory — Ayano-Maisky district (VLA D-1349), Khabarovsk district (VLA D-2800), Nanaisky district (VLA D-3730), Sovetsko-Gavansky district (VLA D-3033, VLA D-3034, VLA D-3091, VLA D-3093, VLA D-3098, VLA D-3100, VLA D-3101, VLA D-3103), Tuguro-Chumikansky district (VLA D-4316); Sakhalin Region (VLA D-883, VLA D-1648, VLA D-1650, VLA D-2352, VLA D-2446, VLA D-2455); Kamchatka Territory (VLA D-3274).

M. crumenuloides Rehm — in litter on bark of *Alnus* sp., 50 44,087'N, 137 24,734'E, VLA D-4576.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-3816); Khabarovsk Territory — Sovetsko-Gavansky district (VLA D-3094).

M. ligni (Desm.) P. Karst. — in litter on wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4582; 50 44,087'N, 137 24,734'E, VLA D-4579.

Distribution in the Russian Far East: Primorsky Territory — Lazovsky district (VLA D-852, VLA D-853, VLA D-854), Shkotovsky district (VLA D-855), Terneysky district (VLA D-3809); Khabarovsk Territory — Khabarovsk district (VLA D-4093), Nanaisky district (VLA D-4320), Sovetsko-Gavansky district (VLA D-3021, VLA D-3377); Sakhalin Region (VLA D-1649, VLA D-3116).

M. subcorticalis (Fuckel) Sacc. — in litter on wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4577.

Distribution in the Russian Far East: Sakhalin Region (VLA D-2449).

Note. This species was found for the first time on the mainland of the Russian Far East; before it was recorded only on the territory of the Sakhalin Island (Raitviir, 1991; Bogacheva, 2012).

Tapesia cinerella Rehm — in litter on bark of *Alnus* sp., erumpent, 50 44,087'N, 137 24,734'E, VLA D-4588; 50 43,691'N, 137 23,279'E, VLA D-4585.

Note. New for Russian Far East.

T. fusca (Pers.) Fuckel — in litter on dry twigs of *Alnus* sp., 50 44,087'N, 137 24,734'E, VLA D-4584.

Distribution in the Russian Far East: Primorsky Territory — Shkotovsky district (VLA D-4147); Khabarovsk Territory — Khabarovsk district (VLA D-2782, VLA D-2791, VLA D-2821, VLA D-3039), Sovetsko-Gavansky district (VLA D-4123); Sakhalin Region (VLA D-1402, VLA D-1404, VLA D-1405, VLA D-2424, VLA D-2434, VLA D-3234); Kamchatka Territory (VLA D-3283).

T. lividofusca (Fr.) Rehm — in litter on dry twigs of *Padus* sp., 50 44,651'N, 137 22,854'E, VLA D-4589.

Distribution in the Russian Far East: Primorsky Territory — Krasnoarmeysky district (VLA D-3947); Khabarovsk Territory — Khabarovsk district (VLA D-2819), Solnechnyi district (VLA D-4360, VLA D-4372); Magadan region (VLA D-1934, VLA D-3648); Sakhalin Region (VLA D-1399, VLA D-1400, VLA D-1401, VLA D-2361, VLA D-2407, VLA D-2448).

Pezizllaceae

Calycellina separabilis (P. Karst.) Baral (Fig. 2) — on dead stems of *Rosa* sp., 50 44,651'N, 137 22,854'E, VLA D-4593.

Note. New for Russian Far East.

Ploettnerulaceae

Belonium excelsior (P. Karst.) Boud. — on bark of *Alnus* sp., close to the water in the splash zone, 50 43,691'N, 137 23,279'E, VLA D-4578.

Distribution in the Russian Far East: Jewish Autonomous Region (VLA D-2532); Khabarovsk Territory — Sovetsko-Gavansky district (VLA D-3089).

Pyrenopeziza benesuada (Tul.) Gremmen — in litter on bark of *Alnus* sp., 50 44,087'N, 137 24,734'E, VLA D-4587; on dry twigs of *Padus* sp., 50 43,691'N, 137 23,279'E, VLA D-4580.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-4128), Krasnoarmeysky district (VLA D-3401, VLA D-3423), Terneysky district (VLA D-830); Jewish Autonomous Region (VLA D-2580); Khabarovsk Territory — Khabarovsk district (VLA D-2862, VLA D-2917, VLA D-4098), Nanaisky district (VLA D-4252), Solnechnyi district (VLA D-4378), Sovetsko-Gavansky district (VLA D-3099); Sakhalin Region (VLA D-824, VLA D-2316, VLA D-2420, VLA D-2441, VLA D-3739); Kamchatka Territory (VLA D-3112, VLA D-3276); Chukotka National District (VLA D-3634, VLA D-3637).

Leotiales Tympanidaceae

Tympanis alnea (Pers.) Fr. — on twigs of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4602.



Fig. 2. *Calycellina separabilis* on stem of *Rubus* sp.

Distribution in the Russian Far East: Primorsky Territory — Khasansky district (VLA D-1453, VLA D-1454, VLA D-1455); Lazovsky district (VLA D-1579, VLA D-1759, VLA D-1761); Magadan region (VLA D-1456, VLA D-3548); Sakhalin Region (VLA D-1452, VLA D-1457, VLA D-1458, VLA D-1459, VLA D-1460, VLA D-1461, VLA D-1462, VLA D-1463).

Tympanis piceae J.W. Groves — on twigs of *Picea* sp., 50 43,691'N, 137 23,279'E, VLA D-4601.

Note. New for Russian Far East.

Rhytismatales
Cudoniaceae

Spathularia rufa Sw. — in litter in a larch-birch forest, 50 44,651'N, 137 22,854'E, VLA D-4557.

Distribution in the Russian Far East: Khabarovsk Territory — Khabarovsk district (VLA D-4242).

Orbiliomycetes
Orbiliomycetidae
Orbiliales
Orbiliaceae

Hyalorbilia inflatula (P. Karst.) Baral et G. Marson — on dead wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4568.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-953, VLA D-954), Khasansky district (VLA D-1728), Krasnoarmeysky district (VLA D-3876), Lazovsky district (VLA D-1661, VLA D-1663, VLA D-1720, VLA D-1721, VLA D-1723, VLA D-1724), Terneysky district (VLA D-952, VLA D-956, VLA D-957, 1997 VLA D-958, VLA D-959, VLA D-960, VLA D-3762); Jewish Autonomous Region (VLA D-2494, VLA D-2558); Khabarovsk Territory — Khabarovsk district (VLA D-2830), Sovetsko-Gavansky district (VLA D-3074), Tuguro-Chumikansky district (VLA D-4314, VLA D-4322), Vaninsky district (VLA D-4111, VLA D-4112); Sakhalin Region (VLA D-955); Kamchatka Territory (VLA D-3147).

Orbilium luteorubella (Nyl.) P. Karst. — in litter on bark of *Padus* sp., 50 43,691'N, 137 23,279'E, VLA D-4573.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-1568), Krasnoarmeysky district (VLA D-3853, VLA D-3856, VLA D-3874, VLA D-3900, VLA D-3948), Lazovsky district (VLA D-1664), Terneysky district (VLA D-961); Jewish Autonomous Region (VLA D-2493); Khabarovsk Territory — Nanaisky district (VLA D-3758), Komsomolsky district (VLA D-4237).

O. xanthostigma (Fr.) Fr. — on dead wood of *Alnus* sp., together with *Rhizodiscina lignyota* (Fr.) Hafellner and *Mollisia caespiticia* (P. Karst.) P. Karst., 50 43,691'N, 137 23,279'E, VLA D-4572; on dead wood of *Alnus* sp., 50 43,691'N, 137 23,279'E, VLA D-4571.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-967), Krasnoarmeysky district (VLA D-3865, VLA D-3898, VLA D-3910, VLA D-3914, VLA D-3945), Lazovsky district (VLA D-968, VLA D-970), Shkotovsky district (VLA D-1883), Terneysky district (VLA D-969, VLA D-971, VLA D-974, VLA D-3808); Jewish Autonomous Region (VLA D-2495); Khabarovsk Territory — Khabarovsk district (VLA D-2554, VLA D-2809, VLA D-2831, VLA D-2833), Polina Osipenko district (VLA D-4369), Sovetsko-Gavansky district (VLA D-3008, VLA D-3023, VLA D-3378), Tuguro-Chumikansky district (VLA D-4256, VLA D-4315); Kamchatka Territory (VLA D-3250).

Pezizomycetes
Pezizales
Ascobolaceae

Ascobolus crenulatus P. Karst. (Fig. 3) — on dung of red fox (*Vulpes vulpes*), 50 43,691'N, 137 23,279'E, VLA D-4599.

Note. New for Russian Far East.

Otidea

Otidea leporina (Batsch) Fuckel — on mossy soil, 50 44,651'N, 137 22,854'E, VLA D-4560.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-1933), Lazovsky district (VLA D-999, VLA D-1002), Shkotovsky

district (VLA D-1864), Terneysky district (VLA D-1004, VLA D-3123), Ussuriskiy district (VLA D-1000, VLA D-1003); Jewish Autonomous Region (VLA D-1784); Khabarovsk Territory — Khabarovsk district (VLA D-2892, VLA D-3488); Sakhalin Region (VLA D-2057, VLA D-2982, VLA D-3652).

Pezizaceae

Peziza arvernensis Roze et Boud. — on sandy soil, 50 44,087'N, 137 24,734'E, VLA D-4558.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-1601, VLA D-2985), Dunay (VLA D-4518), Anuchinsky district (VLA D-3030), Chuguevsky district (VLA D-1607, VLA D-1635), Krasnoarmeysky district (VLA D-3817), Lazovsky district (VLA D-1100, VLA D-1623, VLA D-1736, VLA D-3028); Jewish Autonomous Region (VLA D-2561); Magadan region (VLA D-2934); Khabarovsk Territory — Khabarovsk district (VLA D-2763), Sovetsko-Gavansky district (VLA D-3042); Sakhalin Region (VLA D-2232); Kamchatka Territory (VLA D-3248).

P. fimeti (Fuckel) E.C. Hansen — on the dung of hazel grouse (*Tetrastes bonasia*), 50 44,087'N, 137 24,734'E, VLA D-4559; on the dung of ungulates, 50 44,086'N, 137 23,576'E, VLA D-4600.

Distribution in the Russian Far East: Primorsky Territory — Vladivostok (VLA D-1119), Khasansky district (VLA D-1121), Terneysky district (VLA D-1120); Magadan region (VLA D-2081); Khabarovsk Territory — Khabarovsk district (VLA D-2873), Sovetsko-Gavansky district (VLA D-3005, VLA D-3006, VLA D-3351, VLA D-3358), Tuguro-Chumikansky district (VLA D-4299, VLA D-4300).

Pyronemataceae

Scutellinia macrospora (Svrček) Le Gal (Fig. 4.) — on dead wood of *Sorbus* sp., 50 43,691'N, 137 23,279'E, VLA D-4564.

Note. New for Russian Far East.

S. setosa (Nees) Kuntze — on dead wood of *Padus* sp., 50 44,087'N, 137 24,734'E, VLA D-4548.

Distribution in the Russian Far East: Primorsky Territory — Khasansky district (VLA D-1674), Krasnoarmeysky district (VLA D-3381, VLA D-3406, VLA D-3822, VLA D-3894, VLA D-3946), Lazovsky district (VLA D-1299, VLA D-1301, VLA D-1302, VLA D-1702, VLA D-1704, Ussuriskiy district (VLA D-1300, VLA D-1327, VLA D-1673); Jewish Autonomous Region (VLA D-2573); Khabarovsk Territory — Ajano-Maisky district (VLA D-3467); Sovetsko-Gavansky district (VLA D-3002, VLA D-3003, VLA D-3353); Sakhalin Region (VLA D-1599, VLA D-4452).

DISCUSSION

Mycoinventory studies are relevant in light of climate change and assessment of the state of the rich and diverse



Fig. 3. *Ascobolus crenulatus* on fox droppings.

authors thank the administration and employees of the Komsomolsky State Nature Reserve for organizing and conducting a scientific event on the territory under their jurisdiction.



Fig. 4. *Scutellinia macrospora* on dead broadleaf wood.

biodiversity transformation. The goal of our work was to identify discomycete species diversity in the mycobiota of cedar-broadleaf and southern broadleaf forests at their northern border. We collected specimens from wood and grass remnants in forest litter, soil, and animal excrements. A number of species (*Ascobolus crenulatus*, *Calycellina separabilis*, *Hymenoscyphus epiphyllus*, *Scutellinia macrospora*, *Tapesia cinerella*, and *Tympanis piceae*) were discovered in the Russian Far East for the first time. *Mollisia subcorticalis* was first recorded on the mainland of the region; before it was recorded only on the Sakhalin island area. The list of fungi discovered includes widespread species of floodplain forest communities here associated with dominant tree species such as *Alnus*, *Padus*, *Fraxinus* and some others.

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Новые данные о дискомицетах Комсомольского природного заповедника (Хабаровский край, Россия)

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Территория левого берега реки Амур была исследована в июле 2022 г. Целью работы было выявление видового разнообразия дискомицетов в микобиоте кедрово-широколиственных и южных широколиственных лесов на северной границе их ареала. Были собраны образцы грибов, обитающих на остатках древесных и травянистых растений, почве и экскрементах животных. Их идентификация показала, что в микобиоте заповедника участвуют 35 видов дискомицетов из 16 семейств, относящихся к шести порядкам подотдела *Pezizomycotina*. Ряд видов (*Ascobolus crenulatus*, *Calycellina separabilis*, *Hymenoscyphus epiphyllus*, *Scutellinia macrospora*, *Tapesia cinerella* и *Tympanis piceae*) были впервые обнаружены на Дальнем Востоке России. Вид *Mollisia subcorticalis* был впервые обнаружен на материковой части региона, до этого он был зафиксирован только на территории о. Сахалин.

Ключевые слова: бассейн реки Амур, биоразнообразие, новые данные, распространение грибов