

Ramaria araiospora sp. nov.

var. araiospora

(Pl. II Fig. 7, Pl. XIV Fig. 67)

Basidiocarpia terrestria 5-13 cm alta 2-8 cm crassa, basi alba, rami primordiales et apices rubri, tempore maturationis rami dilute rubescentes apices lutescentes, contextus concolor, consistentia carnosio-fibrosa siccitate friabilis. Tinctura guaiaci resinae et solutio guaiacoli sectionibus ramorum speciminum vivorum adficiunt. Stipes simplex 2-3 x 1.5 cm vel subfasciculatus, usque ad sexies e basi ramosus. Sporae 8-13 x 3-4.5 μ , pro parte maxima 9.9 x 3.7 μ , subtiliter verruculosae. Basidia 43-75 x 7-12 μ basi fibulis destitutae. Hyphae contexti 4-14 μ , crassae tenuitunicatae, cyanophilae, cellulis nonnullis prope septum vesiculatis 8-15 μ crassis. Hyphae gloeoplerae infrequentes 3-4.5 μ crassae.

Holotypus M-739 Castra Aestiva Dalles in comitato Pierce pagi washingtoniaci 10/22/67 lectus, in herbario SUCO conservatus.

Basidiocarp: Habitat--terrestrial, growing under Western Hemlock. Color--base of the fresh fruiting body white to "yellowish white" (3A2-3), or discoloring brownish white, branches "red" (10-12A6-8) in youth, fading during maturation to "light red" (8-10A4-6), apices nearly concolorous in primordial basidiocarps, developing yellow basipetally during maturation, apices of mature specimens "maize yellow" (4A6) or "pale to deep orange" (5A4-8), context concolorous. Dried specimens a shade grayer than "yellowish white" (2A2) in the base, primordial branches retaining some reddish coloration, about "dull red" (8B4), mature branches a shade more yellowish brown than "pale orange" (5A3), context concolorous. Taste--not distinctive. Odor--not distinctive. Form--basidiocarps mostly of small to medium size, 5-13 x 2-8 cm. Stipe single, slightly bulbous, 2-3 x 1.5 cm, sometimes nearly fasciculate, covered with a thin white basal tomentum, abortive or primordial branches often present at the base; branching up to 6 times from the base, poly-chotomous to dichotomous, axils acute or turbinate and branches slight to moderately divergent, internodes elongated in mature specimens, branches mostly slender, 1-5 mm diam, some basal branches up to 4 cm diam, forked or finely divided near apices; apices acute to subacute. Consistency--fleshy-fibrous when fresh, brittle when dried.

Macrochemical Reactions: Context of the stipe non-amyloid; no significant color changes occurring within 30 min of application to branch sections of pyrogallol, α -naphthol, guaiac, guaiacol, phenol, or aniline; occasionally exceptions occurring with guaiac, guaiacol, and α -naphthol.

Microscopic Structures: Spores--average $9.9 \times 3.7\mu$, range $8-13 \times 3-4.5\mu$, subcylindrical, finely ornamented with linearly lobed, cyanophilous warts. Hymenium--basidia clavate, $43-75 \times 7-12\mu$, without basal clamps, contents not consisting of numerous cyanophilous granules, 1-4 sterigmate, mostly 4; sterigmata $4-8\mu$ long, straight, erect or slightly divergent; hymenium and subhymenium combined about 70μ thick. Subhymenial hyphae--interwoven, $2-3\mu$ diam, lacking clamps, thin-walled. Contextual hyphae--parallel near the surface to interwoven a short distance inwards in the base, parallel in the branches, hyphae mostly non-inflated, some moderately inflated, $4-14\mu$ diam, walls smooth to slightly fluted, cyanophilous, thin, $0.25-1\mu$, ampulliform swellings near septa, $8-15\mu$ diam, walls of the vesicles moderately ornamented in the stipe, slightly ornamented in the branches, crystalloid masses occurring in the stipe; clamps absent; gleoplerous hyphae present but infrequent, $3-4.5\mu$ diam.

Collections Examined:

<u>Number</u>	<u>Location</u>	<u>Date</u>
*M-739,		
Holotype	Dalles Recreational Area, Pierce Co.	10/22/67
M-108	Shoulder of hwy 109 about 10 W of Hoquiam, Wash., Grays Harbor Co	11/15/64
M-556	Tahoma Creek Area, Mt Rainier Nat Park, Pierce Co	11/8/66
M-834	Sylvia State Park, Montesano, Wash., Grays Harbor Co	10/30/67
NCU, A.H.		
Sm-17588	Sol Duc Falls, Olympic Nat Pk, Wash., Clallam Co	10/6/41

Discussion: In 1941 A. H. Smith collected from the Olympic National Park a specimen of R. araiospora (NCU, A.H.Sm-17588) which he sent to W. C. Coker for identification. Coker noted that the spores were somewhat longer than those of R. subbotrytis (Coker) Corner but he concluded that the specimen was probably that species. The two species are very closely related but several differences can be cited. The most obvious one is color. Ramaria araiospora is a beautiful and distinctly red species, whereas R. subbotrytis is "coral pink when young fading to creamy ochraceous" (Coker, 1923: 116). The apices of R. subbotrytis tend to be rounded and those of R. araiospora subacute to acute. Although the spore shape is

*For each description one collection is marked by an asterisk. A collection so designated represents the principal collection on which the description is based.

similar in both species, they differ slightly in dimensions and ornamentation. Spores of R. subbotrytis (NCU, Type C-4679) are $7.5-10 \times 3-4\mu$, average $9 \times 3.4\mu$, distinctly but finely ornamented with small raised warts. Spores of R. araiospora are on the average about 1μ longer and the ornamentation seems slightly finer, varying from small raised warts to elongated ones. Ramaria subbotrytis var. intermedia Coker is not closely related to either R. araiospora or R. subbotrytis. The type specimen (NCU, C-2847) has larger spores, $8-13 \times 3.5-4.5\mu$ (average $10.5 \times 4.2\mu$), and clamped hyphae. For a comparison of other related species see the discussion under R. cyaneigranosa var. cyaneigranosa.

The two varieties of R. araiospora are separated on the sole characteristic of the presence or absence of yellow apices at maturity. Variety araiospora has scarlet red branches with yellow tips, and var. rubella is more magenta red with concolorous or paler but not yellow tips.

var. rubella var nov.

(Pl. II Fig 8)

A typo differt ramis tempore maturationis leviter magis carmesinis apicibus rubris persistentibus.

Holotypus M-741 in Valle Amoena prope Elbe in comitato Lewis pagi washingtoniaci 10/24/67 lectus, in herbario SUCO conservatus.

Basidiocarp: Differs from var. araiospora in the branches being slightly more "bluish red or crimson" (10-12A7-8) at maturity and the apices remaining red.

Macrochemical Reactions: Similar to those of var. araiospora.

Microscopic Structures: Spores--average $9.8 \times 3.6\mu$, range $8-14 \times 3-5\mu$. Hymenium--generally the basidia slightly smaller than those of var. araiospora, $30-70 \times 6-10\mu$. Characteristics not mentioned similar to those of var. araiospora.

Collections Examined:

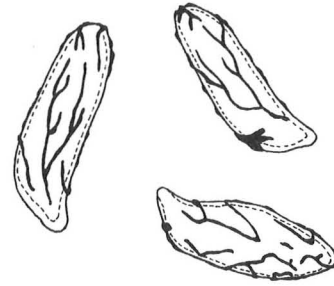
<u>Number</u>	<u>Location</u>	<u>Date</u>
*M-741,		
Holotype	Pleasant Valley, about 5 mi S of Elbe, Wash., Lewis Co	10/24/67

PLATE II

Species of Subgenus Laeticolora

Camera Lucida Drawings of Spores, Standard Line = 10 μ

Figure	Collection
7. <u>R. araiospora</u> var. <u>araiospora</u>	M-739 (Type)
8. <u>R. araiospora</u> var. <u>rubella</u>	M-741 (Type)
9. <u>R. acrisiccesens</u>	M-535 (Type)
10. <u>R. amyloidea</u>	M-717 (Type)
11. <u>R. aurantiisiccescens</u>	M-749 (Type)
12. <u>R. cartilaginea</u>	M-247 (Type)



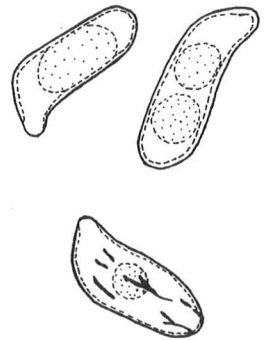
7



8



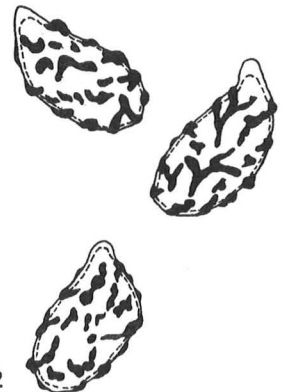
9



10



11



12

PLATE XIV

Species of Subgenus Laeticolora

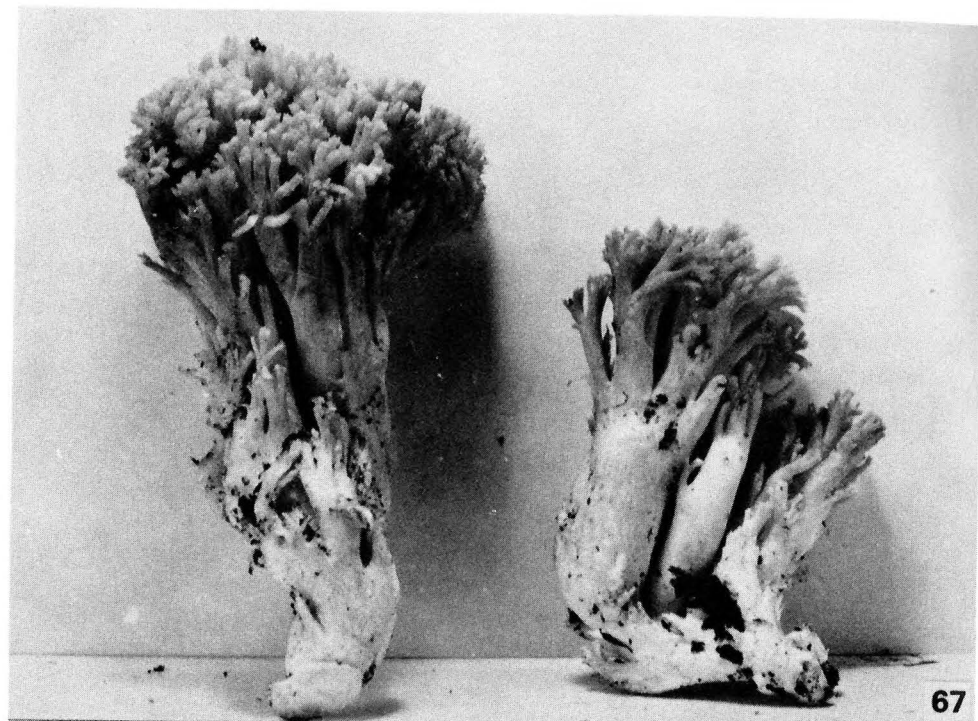
Figure

Collection

67. R. araiospora var. araiospora

Fruiting bodies 5-13 cm tall x 2-8 cm broad

M-108



68. R. cyaneigranosa var. cyaneigranosa

Fruiting bodies 4-12 cm tall x 2-11 cm broad

M-446

