A LITTLE BOOK OF CORALS

Pat and Ed Grey



Ramaria xanthosperma var. australiana

Hai Wu

Clavulinopsis amoena



Ed Grey

Ed Grey died 4 January 2021, aged 90. He will be greatly missed.

Contents

Introduction	p 3
A Quick Field Identification	p 4
Species Descriptions	p 8
Coral Fungi Mycelial forms	p 62
Notes on the Yellow Ramaria Group	p 65
Scientific Names and Derivations	p 66
Spore Size and Shape	p 68
Bibliography	p 72
Websites	p 73
Acknowledgements	p 74
Index of species	p 76

Ramaria anziana



Ed Grey

Ramaria samuelsii



Paul George

Introduction

This booklet describes and illustrates some of the Coral Fungi recorded for Victoria often found on FNCV Fungi Forays or by other forayers in south-east Australia. Each description page consists of a photo and brief notes, all of which must be taken into account to aid identification. The corals are listed alphabetically by genus and species and a common name has been included. Photographs of mycelial forms, a table of spore size and shape and 'Notes on the Yellow *Ramaria* Group' have been added at the back of the book. A field description sheet is available as a separate PDF.

Coral Fungi are so-called because the fruit-bodies resemble marine corals. Some have intricate branching, while others are bushier with 'florets' like a cauliflower or broccolini. They also include those species that have simple club-shaped or spine-shaped fruit-bodies. Coral fungi are noted for their exquisite colouring — every shade of white, cream, grey, blue, purple, orange and red - found across the range of species.

In this revision one species has been added: *Ramaria xanthosperma* var. *australian* which belongs to the group that AM Young classifies as "a difficult cluster of yellow species" (see Notes on the Yellow *Ramaria* Group p 65)

The fertile surface bearing the spores of coral fungi is the external surface of the upper branches. Most species have a white spore print while *Ramaria* species have a yellow-brown spore print, which is sometimes seen when the mature spores dust the coral branches.

Most Corals grow on the ground, but there are some exceptions. Eight grow on wood - the two *Artomyces* species, *Deflexula fascicularis*, *Hericium coralloides*, *Mucronella pendula*, *Multiclavula mucida*, *Pterula gracilis* and *Ramaria ochracea*. *Ramaria filicicola* grows on woody litter and Tree-fern stems. *Macrotyphula juncea* grows on wet litter, leaves and twigs. Usually *Ramariopsis crocea* and *R. kunzei* grow on the ground in moss and litter, but are also occasionally found on Tree-fern stems.

In the description page, a photo illustrates each species and photographers are acknowledged just below the image. The notes start with a general description of the mature fruit-body – **size**, **shape** and **colour** (which may differ in young specimens). Size relates to the whole fruit-body but the height is described as **very tall/very large** over 150 mm, **tall/large** - 90 to 150 mm, **medium** - 50 to 90 mm, **small** - 20 to 50 mm, and **tiny** – under 20 mm. A more detailed identification follows and includes growth habit and habitat. Other images of the described species have also been included.

A QUICK FIELD INDICATION

ON_GROUND	
CAULIFLOWER -SHAPED	
CAULIFLOWER-SHAPED, LARGE (90 to 150 mm tall)	
Pale yellow – orange yellow, viscid	
Ramaria capitata var. capitata	p 40
Salmon pink, non-viscid	-
Ramaria capitata var. ochraceosalmonicolor	p 41
CAULIFLOWER-SHAPED, MEDIUM (50 to 90 mm tall)	
Red	
Ramaria stuntzii var. gelatinosa	p 49
CORAL-SHAPED	
CORAL-SHAPED, VERY LARGE (over 150 mm tall)	
Pale straw with a hint of pink	
Aphelaria complanata	p 8
Wine-red	
Ramaria australiana var. australiana	p 38
CORAL-SHAPED, LARGE (90 to 150 mm tall)	
Buff, tips red to pale pink-reddish	
Ramaria botrytoides	p 39
Buff to pale tan	
Ramaria pyrispora	p 47
Buff with blue tips	
Ramaria zippelii	p 53
Fawn with some dark tips	2.1
Clavulina vinaceocervina	p 21
Lavender	10
Ramaria fennica var. fumigata	p 42
Orange to salmon-pink	- 27
Ramaria anziana	p 37
Pale to dark ash grey	n 16
Clavulina cinerea	p 16
Pink, tips yellow Ramaria samuelsii	n 19
Purple to vinaceous purple	p 48
Ramaria versatilis var. latispora	p 50
Straw yellow to pale ochre	p 30
Ramaria watlingii	p 51
Violet to purple	p 31
Clavaria zollingeri	p 14
ciarana Lonnigen	P 14

ON_GROUND cont.		
CORAL-SHAPED, LARGE (90 to 150 mm tall) cont.		
Yellow with red-staining stem		
Ramaria xanthosperma var. australiana	p 52	
Yellow with wine-red bruising	•	
Ramaria lorithamnus	p 45	
CORAL-SHAPED, MEDIUM (50-90 mm tall)		
Mustard-yellow		
Ramaria flaccida	p 44	
Pale yellow to buff		
Tremellodendropsis pusio	p 61	
White		
Ramariopsis kunzei	p 56	
White with spiky tips		
Clavulina coralloides	p 17	
CORAL-SHAPED, SMALL (20 to 50 mm tall)		
Brown to red-brown		
Ramariopsis ramarioides	p 58	
Green-yellow		
Ramaria abietina	p 36	
Rich mauve		
Ramariopsis pulchella	p 57	
Yellow		
Ramariopsis crocea	p 55	
CLUB-SHAPED		
CLUB-SHAPED, TALL (90 to 150 mm tall)		
Red		
Clavulinopsis sulcata	p 26	
White, in exotic vegetation	•	
Clavulina rugosa	p 18	
White, in native vegetation	1	
Clavaria fragilis group	p 12	
Yellow	1	
Clavulinopsis amoena	p 22	
Clavulinopsis fusiformis	p 25	

ON_GROUND cont.	
CLUB-SHAPED, MEDIUM (50 to 90 mm tall)	
Buff	12
Clavaria tenuipes	p 13
Dark ash grey to grey-brown, Clavulina tasmanica	n 20
Orange-yellow	p 20
Clavulinopsis depokensis	p 24
Pink and red	p 2-
Clavulinopsis corallinorosacea	p 23
Yellow	r
Ramariopsis simplex	p 59
White, in native vegetation	
Clavulina subrugosa	p 19
CLUB-SHAPED, SMALL (20 to 50 mm tall)	
White, in native vegetation	
Clavicorona taxophila	p 15
CLUB-SHAPED, TINY (1 to 20 mm tall)	_
Orange, tiny	
Multiclavula vernalis	p 33
ON LITTER	
CLUB-SHAPED, MEDIUM (50 to 90 mm tall)	
Whitish	
Macrotyphula juncea	p 30
•	r
ON WOODY LITTER	
CORAL-SHAPED, LARGE (90 to 150 mm tall)	
Buff with white tips	. 12
Ramaria filicicola	p 43
ON DICKSONIA ANTARCTICA SMOOTH TREE-FER	N
CORAL-SHAPED, LARGE (90 to 150 mm tall)	
Buff with white tips	
Ramaria filicicola	p 43
CORAL-SHAPED, MEDIUM (50 to 90 mm tall)	
White	
Ramariopsis kunzei	p 56
CORAL-SHAPED, SMALL (20 to 50 mm)	
Yellow, delicate	
Ramariopsis crocea	p 55

ON <i>DICKSONIA ANTARCTICA</i> SMOOTH TREE-I	FERN cont.
Whitish	
Pterula gracilis	p 34
ON DEAD WOOD	
CORAL-SHAPED	
CORAL-SHAPED, LARGE (90 to 120 mm tall)	
Whitish to fawn	
Artomyces austropiperatus	p 10
CORAL-SHAPED, MEDIUM (50 to 90 mm tall)	
Pale ochre	
Ramaria ochracea	p 46
Whitish to fawn	
Artomyces colensoi group	p 11
CLUB-SHAPED, TINY (1 to 20 mm tall)	
White	
Multiclavula mucida	p 32
SPINE-SHAPED	
SPINE-SHAPED, LARGE (90-120 mm long)	
Straw	
Hericium coralloides	p 29
SPINE-SHAPED, SMALL (20 to 50 mm tall)	
Translucent white	
Mucronella pendula	p 31
SPINE-SHAPED, TINY (1 to 20 mm tall)	
White	
Pterula gracilis	p 34
Whitish to dirty cream	р 3-т
Deflexula fascicularis	p 28
2 cj. com jest com no	P 20



Pat Grey John Eichler

Aphelaria complanata Straw-head Aphelaria

Fruit-body: a very large, compact spherical mass, multi-branched; branches are upright, somewhat flattened and thin, and are coloured pale straw with a hint of pink

- **Size** to 200 mm tall or higher x 160 mm wide.
- **Branches** to 3mm thick, tapering upwards becoming fine (to less than 1mm thick), long, somewhat flattened, pale straw with a hint of pink.
- Branch tips rounded, pale, off-white.
- Spore print white.
- **Odour** often strong and unpleasant.

Habit: solitary.

Habitat: on the ground.

Artomyces austropiperatus



Reiner Richter

Artomyces colensoi



De'ana Williams



De'ana Williams

Artomyces austropiperatus Peppery Coral

Fruit-body: large, multi-branched; branches have crown-like tips, whitish, pink-beige or fawn. The larger of two very similar corals growing on wood.

- Size to 120 mm tall x 80 mm wide.
- **Branches** upright, to 6 mm thick, each with 4-6 branches developing at the point of division, forming up to 6 ranks, whitish, pink-beige or fawn.
- Branch tips crown-like (coronate), whitish to fawn.
 Stem to 20 mm tall x 4 mm thick, concolourous with branches.
- **Spore print** white.

Note – immediate or delayed, strong, persistent peppery taste. Often multiple fruit-bodies grow close together. Compare size difference with the similar-looking *A. colensoi* (p 11)

Habit: gregarious and grouped close together. **Habitat**: on fallen wood in wet native forests.



Torbjorn von Strokirch

Reiner Richter

Artomyces colensoi group Delicate Peppery Coral

Fruit-body: medium, multi-branched; branches have crown-like tips, whitish to fawn. The smaller of two very similar corals growing on wood.

- **Size** to 60 mm tall x 15 mm wide.
- **Branches** upright, very fine, less than 1mm thick, with 2-4 branches developing at the point of division, forming up to 6 ranks whitish to fawn.
- **Branch tips** crown-like (coronate), whitish to fawn.
- **Stem** to 10 mm tall x 1.5 mm thick.
- **Spore print** white.

Note - delayed peppery taste. Often multiple fruit-bodies grow close together. This group includes *A. candelabrus*, which is only differentiated on minor microscopical features. Compare size difference with the similar-looking *A. austropiperatus* (p 10)

Habit: gregarious and grouped close together. **Habitat**: on fallen wood in wet native forests.



De'ana Williams

Richard Hartland

Clavaria fragilis group Brittle Club

Fruit-body: tall, simple club; usually grows in dense clusters, often caespitose (with all the clubs joined together at the base), white, very brittle.

- Size to 100 mm tall x 4 mm thick.
- **Club** simple, white, smooth.
- **Club tip** rounded, not acute or crested, white, becoming pointed and yellow to brown with age.
- **Stem** merges smoothly into the club, white.
- Spore print white.

Note – the group consists of a number of similar white clubs including *C. acuta* and *C. alboglobospora* that can only be securely separated on microscopic grounds.

Habit: dense clusters, caespitose.

Habitat: on the ground in eucalypt forests.



John Eichler De'ana Williams

Clavaria tenuipes Buff Club

Fruit-body: medium, simple or once-branched club; the club is pale yellow to buff with a distinctly darker stem.

- **Size** to 85 mm tall x 5 mm thick.
- Club simple or once branched, longitudinally grooved, pale yellow to buff, smooth.
- **Club tip** rounded to flattened, pale yellow to buff.
- Stem distinct, tapering downwards, yellow-brown, darker than club.
- **Spore print** white.

Habit: gregarious in groups.

Habitat: on the ground in litter or bare soil, in native forests.



Richard Hartland

Pat Grey

Clavaria zollingeri Violet Coral

Fruit-Body: large, multi-branched; branches have rounded tips and grow from a short stem; fruit-body is violet to pinkish ageing dull grey-brown.

- **Size** to 100 mm tall x 70 mm wide.
- **Branches** to 6 mm thick, usually dichotomous (divided into two), violet, pinkish, aging to dull grey-brown, fragile, brittle, dry, smooth.
- **Branch tips** rounded with 2-4 blunt protrusions, purple to brownish, often white with spores.
- **Stem** very short, pale grey-purple, arises from a white mycelial mat, occasionally with white mycelium over the base.
- **Spore print** white.
 - **Note** the slightly smaller fruit-body and different shaped branch tips of *Clavaria zollingeri* differentiate it from the similarly-coloured *Ramaria fennnica* var. *fumigata* (p 42) and *Ramaria versatilis* var. *latispora* (p 50)

Habit: usually solitary.

Habitat: on the ground in litter under Tree-ferns and eucalypts in wet forests.



Charlie Price

Clavicorona taxophila Fluted Trumpet

Fruit-body: small, delicate, simple trumpet-like club; trumpet is snowwhite and longitudinally striate, flaring out at apex to look frilly.

- Size to 30 mm tall x 6 mm thick at apex, narrowing to 2 mm thick at base.
- **Club** simple, trumpet-shaped, narrowing at base, longitudinally striate, white, ageing slightly yellow.
- Club tips slightly cup-shaped, thin, with a crown-like to frilly rim.
- **Stem** translucent, arises from a white hairy mycelial mat.
- **Spore print** white.

Note – grows in moist soil after heavy rain.

Habit: groups, sometimes a single fruit-body, occasionally in 2's. **Habitat**: on the ground amongst litter in dry eucalypt forests after heavy rain.



Ed Grey Richard Hartland

Clavulina cinerea Ash-grey Coral

Fruit-body: large, multi-branched or unbranched; branches are pale to dark ash-grey to purple, and often dulled with a powdery bloom.

- Size to 120 mm tall x 60 mm wide.
- Branches to 10 mm thick, ash-grey, or with a hint of purple if infected, smooth to wrinkled, or longitudinally grooved.
- **Branch tips** fat and blunt or slightly crested, can be a darker grey or brown.
- **Stem** present as a short, fleshy sterile base, white to ochre.
- Spore print white.

Note – Immature specimens are white and smaller. Fruit-bodies may be infected with the pyrenomycete *Helminthosphoeria clavariarum* which causes a colour change from ash-grey to purple tinged. A hand lens should show the embedded perithecia as black dots.

Habit: solitary or gregarious, forming densely branched tufts.

Habitat: on the ground in eucalypt and exotic trees.



Paul George Pat Grey

Clavulina coralloides (Clavulina cristata) Spiky Coral

Fruit-body: large, sparingly branched; branches are white with spiky tips, ageing ochre to brownish.

- Size to 100 mm tall x 100 mm wide.
- **Branches** to 4 mm thick, sparingly or repeatedly divided (up to 4 times), white with occasional pink tinges, flattened.
- **Branch tips** usually crested with several sharp points (cristate), white often ageing darker.
- **Stem** to 30 mm tall x 5 mm thick, white.
- **Spore print** white.

Note – In most cases not all the branch tips are crested, but there are always some, which will identify the species. Specimens are routinely infected with the pyrenomycete *Helminthosphoeria clavariarum* which causes a colour change from white to grey to black. A hand lens should show the embedded perithecia as black dots.

Habit: solitary or gregarious.

Habitat: on the ground in native forests, woodlands, heaths and exotic trees.



Ed Grey

Clavulina rugosa Wrinkled Coral

Fruit-body: tall, unbranched to sparsely branched; club is often contorted; white. Always grows with exotic (i.e. non-native) vegetation.

- Size to 120 mm tall x 15 mm thick.
- Club contorted and twisted or simple, sometimes flattened, white, smooth to wrinkled.
- Club tip blunt or crested.
- Stem not clearly defined.
- Spore print white.

Note – *Clavulina rugosa* only grows with exotic, non-native plants, unlike the similar-looking *Clavulina subrugosa* (p 19) that is only found amongst Eucalypt or native vegetation. Specimens are routinely infected with the pyrenomycete *Helminthosphoeria clavariarum* which causes a colour change from white to grey to black A hand lens should show the embedded perithecia as black dots.

Habit: solitary or gregarious.

Habitat: on the ground, always with exotic trees (conifers and hardwoods).



Reiner Richter

Clavulina subrugosa White Club

Fruit-body: medium, usually a simple club but can be branched; club is sometimes wrinkled; off-white. Always grows in eucalypt forests.

- Size to 85 mm tall x 8 mm thick.
- **Club** simple or sparsely branched, off-white to yellowish, smooth.
- Club tip rounded, not acute or crested.
- **Stem** to 4 mm thick, white becoming darker.
- Spore print white.

Note – *Clavulina subrugosa* is never amongst exotic vegetation like *C. rugosa* (p 18), nor does it grow in caespitose groups like the *Clavaria fragilis* group (p 12).

Habit: solitary or clustered.

Habitat: on the ground, always in eucalypt forests.



Charlie Price Richard Hartland

Clavulina tasmanica Lumpy Coral

Fruit-body: small to medium, sparsely branched; branches are irregular and lumpy, deep ash-grey with a whitish to tan, bloom, widening at top, and often splits into pale tan tips.

- **Size** to 25 (70) mm tall to 5 (7) mm wide.
- **Branches** irregular, can be simple to sparsely branched (in pairs or occasionally in three's), greyish-brown with whitish to tan bloom, lumpy.
- **Branch tips** split at the apex into 2-6 finger-like forms, pale tan.
- **Stem** short, to 4 mm thick, pale, arises from an off-white basal mycelial pad.
- **Spore print** white.

Habit: gregarious to caespitose in groups of up to 4 individuals.

Habitat: mossy soil in wet eucalypt forests.



Bruce Fuhrer Pat Grey

Clavulina vinaceocervina Dark-tipped Coral

Fruit-body: large, contorted or irregularly branched; branches are pink to fawn, and there are always some with dark tips.

- **Size** to 100 mm tall x 60 mm wide.
- Branches variable, often flattened, twisted or short, stout or thin, pink to fawn, wrinkled and knobby.
- **Branch tips** blunt or acute and thorn-like, dark (vinaceous).
- **Stem** to 10 mm tall x 3 mm thick, whitish, arises from a small white mycelial mat ca. 8 mm diameter.
- Spore print white.

Note - there are always some dark tips to identify the species; the fruit-body bruises brown.

Habit: solitary or clustered.

Habitat: on the ground amongst shrubs in eucalypt forests and rainforests.



De'ana Williams

Reiner Richter

Clavulinopsis amoena (Clavaria amoena) Yellow Club

Fruit-body: tall, simple club; club is cylindrical, occasionally flattened, and bright yellow to orange.

- **Size** to 100 mm tall x 5 mm thick.
- **Club** simple, cylindrical but sometimes flattened and grooved, sometimes forked, bright yellow to orange.
- Club tip tapering, narrowly to broadly rounded.
- Stem to 17 mm long x 3 mm thick, translucent pale yellow, may or may not arise from a small whitish mycelial patch.
- **Spore print** white.

Note –*Clavulinopsis amoena* although sometimes flattened, is not twisted like the club of C. *depokensis* (p 24), and, unlike *C. fusiformis* (p 25), does not emerge in tight or caespitose clusters. If smaller than 70 mm tall x 4 mm wide, check *Ramariopsis simplex* (p 59).

Habit: solitary or gregarious in groups.

Habitat: on the ground amongst moss and rotting woody litter of native forests and woodlands.



Richard Hartland

Carol Page

Clavulinopsis corallinorosacea (Clavaria corallinorosacea) Rosy Coral Club

Fruit-body: medium, simple club; club is pale pink to reddish with a distinct red stem.

- **Size** to 80 mm tall x 3 mm thick.
- Club simple, smooth, cylindrical, with a pale pink fertile surface caused by the white powdery bloom of spores.
- Club tip blunt.
- **Stem** to 2 mm thick, red in contrast to the pale pink fertile top.
- **Spore print** white.

Note – old fruit-bodies lose the pale bloom and become completely red, and look similar to the all-red *C. sulcata* (p 26).

Habit: gregarious in small groups.

Habitat: on the ground amongst moss and litter of native forests.



De'ana Williams

John Eichler

Clavulinopsis depokensis (Clavaria depokensis) Bright Orange-yellow Club

Fruit-body: medium, simple club; club is bright orange to yellow, flattened and twisted, and the tips often age brown.

- **Size** to 80 mm tall x 7 mm thick (usually much narrower).
- **Club** simple, cylindrical or flattened, sometimes divided, commonly twisted, bright orange to yellow, waxy or smooth.
- Club tip tapered or rounded, yellow, often ageing brown.
- Stem narrower than club, very short to 5 mm long, occsionally two may unite to form a single stem, lemon-yellow; arises from a small white mycelial pad.
- **Spore print** white.

Note – the *Clavulinopsis depokensis* club is twisted, with pointed, often brownish branch tips unlike the all-yellow *C. amoena* (p 22).

Habit: clustered in groups.

Habitat: on the ground in deep moist litter of eucalypt forests.



Alan Cressler Web: en. Wikipedia.org

Clavulinopsis fusiformis (Clavaria fusiformis) Golden Spindles

Fruit-body: tall, simple club; club is bright yellow with sharp, brown tips. They emerge in tight clusters from an underground fused base.

- **Size** to 150 mm tall x 10 mm thick.
- **Club** simple, often flattened, sometimes with longitudinal grooves, bright yellow to orange-yellow, fading with age, dry.
- **Club tip** sharply pointed, with brownish tints.
- Stem not defined, clusters of clubs arise from a white underground fused base.
- Spore print white.

Note – Clavulinopsis fusiformis clubs emerge in tight or caespitose clusters, unlike C. amoena (p 22) and C. depokensis (p 24) whose clubs emerge singly or gregariously.

Habit: clustered on an underground fused base.

Habitat: on the ground in native forests.



Ed Grey Reiner Richter

Clavulinopsis sulcata (Clavaria miniata) Flame Fungus

Fruit-body: tall, simple club, occasionally some branching; club is red to orange with a red to orange stem.

- **Size** to 100 mm tall x 5 mm thick.
- Club variously shaped flattish, slender, contorted, colour varies from red, orange-pink to reddish orange, smooth.
- Club tip rounded or tapered, occasionally divided, red or yellowish.
- **Stem** to 20 mm long x 5 mm thick, no distinct colour difference between the stem and club.
- **Spore print** white.

Note – *Clavulinopsis sulcata* is always completely reddish, unlike *C. corallinorosacea* (p 23) which has a pink club and red stem.

Habit: clustered in groups.

Habitat: on the ground amongst moss and litter of native forests.

Clavulinopsis sulcata



Claire Ferguson



Torbjorn von Strokirch

Deflexula fascicularis (Pterula fascicularis) Clustered Icicle

Fruit-body: small, spines single or clustered, pendulous; spines are whitish to dirty cream, sometimes with lilac tints. Grows on wood.

- **Size** to 15 mm long x 2 mm thick.
- **Spine** simple, sometimes branched, thin, finger-like, whitish to dirty cream, sometimes with lilac tints, smooth.
- **Spine tip** tapers to a point.
- Stem not clearly defined.
- **Spore print** white.

Note – D. *fascicularis* grows in a similar fashion (i.e. solitary or gregarious) to *Mucronella pendula* (p 31), but lacks a distinctive stem.

Habit: single or in clusters.

Habitat: on dead or living wood, often of a rought-barked species in native forests.



Gary Watson Geoff Lay

Hericium coralloides (H. clathroides) Coral Tooth

Fruit-body: very large, multi-branched; a stem supports a mass of coral-like branches from which pendulous fragile spines are evenly distributed; white to creamy-yellow. Grows on dead wood.

- **Size** to 500 mm diameter x 250 mm depth.
- Branches wavy to drooping, white ageing creamy-yellow, felty to smooth, brittle, subdivide from the stem into thinner branches.
- **Spine** to 15 mm long x 1 mm diameter, slender, simple, pendulous, attached to side or underside of a branch, white to creamy-yellow, smooth, fragile, tapers to a pointed tip.
- **Stem** to 40 mm wide, lateral, white to cream, tough, smooth, rooted in substrate.
- **Spore print** white.

Note - a variant of this coral is more compact with shorter spines (see above image by Geoff Lay).

Habit: single or in groups.

Habitat: on dead wood of native or introduced trees in wet areas.



Paul George

Macrotyphula juncea Fairy Club

Fruit-body: medium, simple club; club is very thin, cylindrical, white to tan with a distinct brown stem arising directly from the substrate.

- **Size** to 80 mm tall x 2 mm thick.
- **Club** simple, cylindrical, thin, white to tan, smooth.
- Club tip blunt.
- Stem to 25 mm tall x 2 mm thick, brown, arising from a white mycelial disc or white rhizomorphs that are interwoven amongs the substrate.
- Spore print white.

Habit: scattered or in clusters.

Habitat: on wet leaves and litter in native forests.



Reiner Richter

Mucronella pendula Icicle

Fruit-body: small, single, pendulous spine; spine is translucent white with a distinct stem. Grows on fallen wood.

- Size to 25 mm long x 10 mm thick at base tapering to a point.
- **Spine** simple, spear-head shape, translucent white, smooth.
- Spine tip pointed.
- **Stem** to 10 mm long x 3 mm thick, narrow, cylindrical, white, gelatinous; stem remains after the club has liquefied and disappeared.
- **Spore print** white.

Note – M. pendula drips a watery substances from the spine tip.

Habit: single or in groups.

Habitat: on wet rotting wood, particularly hollow ends or lower surfaces of fallen trunks in sheltered positions in native forests.



John Eichler

Multiclavula mucida White-club Scum-lover

Fruit-body: tiny, simple club; club is slender and white. This is a lichenised fungus growing with a *Coccomyxa* alga on wood.

- Size to 13 mm tall x 2 mm thick.
- **Club** simple or once-branched, often flattened, white to cream, smooth.
- **Club tip** rounded, may brown when dehydrated.
- **Stem** difficult to distinguish from club, but is narrower and more transluscent, and arises from a minute white mycelial pad.
- **Spore print** white.

Note – The white clubs growing in algal scum on wood differentiates *Multiclavula mucida* from *M. vernalis* (p 33) which has orange clubs and grows in algal scum on soil.

Habit: scattered or in groups.

Habitat: in algal scum (*Coccomyxa* sp.) on wet, debarked, rotting wood.



Web: Lichens of Belgium, Luxembourg and northern France.

Multiclavula vernalis Orange-club Scum-lover

Fruit-body: tiny, simple club usually unbranched; club is slender, pale orange with a distinctly paler stem. There is often a small white spot at the apex, like a cap. This is a lichenised fungus growing with a *Coccomyxa* alga on wet soil.

- Size to 14 mm tall x 2.5 mm thick.
- Club simple, pale orange, smooth, easily distinguished from stem.
- **Club tip** bluntly rounded.
- Stem to 7 mm long x 1.5 mm thick, pale yellowish, arises from a minute whitish mycelial pad on alga-covered soil.
- **Spore print** white.

Note – The orange clubs growing in algal scum on soil differentiates *Multiclavula vernalis* from *M. mucida* (p 32) which has white clubs and grows in algal scum on wood.

- Habit: groups.
- **Habitat**: in algal scum (*Coccomyxa* sp.) on wet, sandy or silty soil.



Reiner Richter

Pterula gracilis (Typhula gracilis) White Spikes

Fruit-body: small, simple spine; the translucent white spine is cylindrical and tapers to a point. Grows on dead wood and dead Tree-fern rachises.

- **Size** to 5 mm long x less than 1 mm thick.
- Spine simple, cylindrical, tapers to an acute point, translucent white, shiny, smooth.
- **Spine tip** acutely pointed.
- Stem absent.
- Spore print white.

Note – the spine base bristles with short hairs two-three microns in diameter.

Habit: single or in groups.

Habitat: on dead wood and often on dead rachises of Tree-ferns.

Macrotyphula juncea





Ed Grey Marc Campobasso

Ramaria abietina (Phaeoclavulina abietina) Green-staining Coral

Fruit-body: small, multi-branched; branches are yellowish, staining green all over and grow in deep litter.

- **Size** to 35 mm tall x 25 mm wide.
- **Branches** upright, slender, yellowish becoming green, axils (branch divisions) narrowly round.
- **Branch tips** bluntly pointed, yellowish becoming green.
- Stem to 15 mm long x 2 mm thick, yellowish-green, white at base, arises from a white mycelial mat, white rhizomorphs present.
- Spore print yellow.

Note - because of its small-size and yellow-green colour, this coral could easily be overlooked or mistaken for a moss.

Habit: clusters, often in fairy rings. **Habitat**: on the ground in deep litter.



Matthias Theiss

Ramaria anziana Orange and Salmon-pink Coral

Fruit-body: large, multi-branched; branches are numerous, upright, orange or salmon-pink with yellow tips and arise from a single or compound stem.

- Size to 110 mm tall x 85 mm wide.
- Branches upright, slender, cylindrical, orange to salmon-pink, smooth or (rarely) finely grooved, axils (branch divisions) round to narrowly round.
- **Branch tips** slenderly pointed (awl-shaped) or with blunt protrusions, yellow.
- Stem to 20 mm long x 10 mm thick, often compound where several small stems fuse (to 30 mm x 20 mm). The stem is pale at base becoming orange or salmon-pink towards the branches, smooth to pruinose (finely powdery); aborted (undeveloped) branches present.
- **Spore print** yellow-brown.

Note – the orange fruit-body, lack of fruity odour and the occasional compound stem differentiates *R. anziana* from the similar-looking *R. samuelsii* (p 48).

Habit: gregarious.

Habitat: on the ground in litter of eucalypt forests.



David Catcheside

Ramaria australiana var. australiana Wine-red Coral

Fruit-body: very large, multi-branched; at first the branches are compact, then more open (coralloid), and coloured vinaceous (wine red), ageing to brown. Stem whitish, possibly with yellow stains.

- Size to 160 mm tall x 160 mm wide.
- Branches long, vinaceous, main axils (branch divisions) variable from round to V-shaped.
- **Branch tips** rounded with 2-4 blunt protrusions, vinaceous becoming brown.
- Stem stout, to 50 mm long x 25 mm thick, cylindrical and deeply rooting, white becoming pallid pink, with possible yellow stains where bruised, smooth; aborted (undeveloped) branches present.
- **Spore print** yellow-brown.

Habit: solitary or in 2's.

Habitat: in soil and amongst litter of wet eucalypt forests.



Richard Hartland

John Eichler

Ramaria botrytoides Pink-tipped Coral

Fruit-body: large, multi-branched; branches are white, cream to pale pink becoming yellow-brown with spore stains; branch tips pale pink to reddish. The stem is white.

- Size to 120 mm tall x 110 mm wide.
- Branches becoming long, white to cream to pale pink becoming yellowbrown with spore stains, main axils (branch divisions) round.
- **Branch tips** with blunt protrusions, pale pink to reddish.
- Stem to 40 mm long x 15 mm thick, white; aborted branches present.
- **Spore print** yellow-brown.

Note - immature specimens are more compact and have cream to pinkish short branches with reddish tips. Dr A Young has determined that *R. botrytis* does not occur in Australia and that all collections labelled *R. botrytis* are *R. botrytoides*.

Habit: solitary or in small groups.

Habitat: on the ground amongst litter in wet eucalypt forests.



Paul George

Ramaria capitata var. capitata Pale Cauliflower Coral

Fruit-body: large, multi-branched; branches are terraced to cauliflower-shaped, pale yellow to orange-yellow. The branch tips are viscid and yellow. The stem is off-white.

- **Size** to 150 mm tall x 150 mm wide.
- **Branches** to 10 mm thick, pale yellow, finely grooved longitudinally, axils (branch divisions) usually acute.
- **Branch tips** swollen and almost fused together when they form a completely closed surface, yellow, viscid.
- Stem to 20 mm long x 10 mm thick, solid, rounded, hairy, off-white.
- **Spore print** yellow-brown.

Note – The fruit-body of *R. capitata* var. *capitata* bruises brown. This variety has viscid branch tips and soil particles often adhere to them, unlike the branch tips of *R. capitata* var. *ochraceosalmonicolor* (p 41) which are dry (non-viscid).

Habit: solitary to gregarious.

Habitat: on the ground in leaf litter of native forests.



Paul George Richard Hartland

Ramaria capitata var. ochraceosalmonicolor Salmon-pink Cauliflower Coral

Fruit-body: large, multi-branched, cauliflower-shaped; branches are salmon-pink. The branch tips tend to fuse together and are dry (not viscid). The stem is off-white.

- **Size** to 150 mm tall x 150 mm wide.
- **Branches** to 10 mm thick, salmon-pink to apricot-pink, axils (branch divisions), usually acute.
- Branch tips fuse together forming a completely closed surface, yellowishorange, dry (non viscid).
- **Stem** to 20 mm long x 10 mm thick, rounded, off-white, hairy.
- **Spore print** yellow-brown.

Note – The fruit-body of *R. capitata* var. *ochraceosalmonicolor* bruises brown. This variety has dry branch tips and soil particles do not adhere to them as it does on the viscid branch tips of *R. capitata* var. *capitata* (p 40).

Habit: solitary to gregarious.

Habitat: on the ground in leaf litter of native forests.



De'ana Williams

John Eichler

Ramaria fennica var. fumigata Lavender Coral

Fruit-body: large, multi-branched; branches have tapering tips and vary in colour from lavender to violet-purple-brown, ageing to clay-pink.

- Size to 140 mm tall x 80 mm wide.
- **Branches** to 4 mm thick, cylindrical, lavender to purple; yellow brown spores show as brownish patches, axils (branch divisions) round.
- **Branch tips** tapered, two to four blunt protrusions, lavender to purple-brown.
- **Stem** to 40 mm long x 25 mm thick, white at base, becoming lavender near first branching.
- **Spore print** yellow-brown.

Note – *R. fennnica* var. *fumigata* with multiple thin branches is a similar size and colour to *R. versatilis* var. *latispora* (p 50), which has fewer and thicker branches. In comparison with the similarly-coloured *Clavaria zollingeri* (p 14), *R. fennica* var. *fumigata* has a larger fruit-body and different shaped branch tips.

Habit: solitary or in groups.

Habitat: on the ground in eucalypt forests.



Pat Grey Richard Hartland

Ramaria filicicola (R. gracilis) Pale Buff Coral

Fruit-body: large, multi-branched; branches are upright and buff with white tapered tips. It grows in woody litter.

- **Size** to 100 mm tall x 60 mm wide.
- **Branches** are very upright, buff, axils (branch divisions) usually rounded.
- **Branch tips** tapered with 2-5 sharp points or blunt protrusions, dull white.
- Stem to 20 mm long x 5 mm thick, pale buff, mostly smooth, arises from a white mycelial mat with abundant white root-like rhizomorphs, both of which are attached to woody litter.
- Spore print yellow-brown.

Note – has a slightly aniseed smell. Dr A Young has determined that *R. gracilis* does not occur in Australia and that all Australian collections labelled *R. gracilis* are, in fact, *R. filicicola*.

Habit: solitary or in groups, often forming a ring.

Habitat: in woody litter on the ground with native or exotic trees and on Tree-fern stems.



De'ana Williams

Carol Page

Ramaria flaccida (Phaeoclavulina flaccida) Mustard-yellow Coral

Fruit-body: medium, multi-branched; branches are upright and mustard-yellow with finely pointed tips.

- **Size** to 60 mm tall x 40 mm wide.
- Branches upright, mustard-yellow, arising close to ground level, axils (branch divisions) narrowly rounded.
- **Branch tips** finely pointed, slightly paler than branches.
- Stem, where present, to 20 mm long x 4 mm thick, often well below ground level, arises from a mass of cream rhizomorphs and occasionally a cream mycelial mat.
- **Spore print** yellow-brown.

Habit: in groups, sometimes forming rings.

Habitat: on the ground in eucalypt forest and Tea-tree thickets.



Ed Grey

Ramaria Iorithamnus Yellow Tufted Coral

Fruit-body: large, multi-branched; yellow branches grow from a small whitish stem, and the fruit-body stains red-brown. It also tends to grow in clusters.

- Size to 100 mm tall x 40 mm wide (tufts to 80 mm wide).
- Branches mostly upright, cylindrical, yellow, ageing buff, smooth, axils (branch divisions) rounded.
- Branch tips dichotomous (divided into two) with rather blunt prongs, pale yellow.
- **Stem** to 25 mm long x 4 mm thick, whitish, smooth.
- **Spore print** yellow-brown.

Note - bruising of the fruit-body leaves a wine-red or brown stain on the surface.

Habit: in clusters and groups.

Habitat: on the ground in eucalypt forests.



Paul George Richard Hartland

Ramaria ochracea (Phaeoclavulina ochracea) Delicate Coral

Fruit-body: medium, multi-branched; branches are fine, cream to pale ochre with pointed tips. Grows on wood and Tree-fern stems.

- **Size** to 55 mm tall x 35 mm wide.
- **Branches** to 1.5 mm thick, upright, fine, cream to pale ochre, axils (branch divisions) round.
- Branch tips pointed, usually dichotomous (divided into two) whitish, ageing pale tan.
- **Stem** to 30 mm long x 6 mm thick, thin, arises from a whitish mycelial ball or tuft.
- **Spore print** pale yellow-brown.

Habit: solitary or in small groups.

Habitat: on dead wood and Tree-fern stems.



Pat Grey

Ramaria pyrispora Flaring Branched Coral

Fruit-body: large, multi-branched, coralloid; branches are pale tan to buff, tips off-white with pointed or blunt protrusions.

- **Size** to 110 mm tall x 80 mm wide.
- Branches flare as they ascend, somewhat flattened, pale tan to buff, axils (branch divisions) narrowly round.
- Branch tips have pointed or blunt protrusions, pale almost white.
- Stem to 20 mm long x 10 mm thick, tapering down to an acute somewhat hairy base, white, soil and litter attached, sparse white mycelium was observed but not white rhizomorphs; aborted (undeveloped) branches present.
- **Spore print** yellow-brown.

Note – Does not colour when bruised. *Ramaria pyrispora* can be differentiated from the similar-looking *R. filicicola* (p 43) by the absence of a mycelial mat attached to woody litter. There are two other similar yellowish *Ramaria* species – *R. subtilis* var. *microspora* and *R. xanthosperma* var. *australiana* (p 52).

Habit: groups, often forming a ring.

Habitat: in ground amongst the litter in wet eucalypt forests.



Matthias Theiss

Ramaria samuelsii Upright Pink Coral

Fruit-body: large, multi-branched; compact fruit-body, branches are very upright, pink with yellow tips, and a distinct stout stem.

- Size to 100 mm tall x 60 mm wide.
- **Branches** very upright, cylindrical, longitudinally grooved, pink, axils (branch divisions) roundish.
- **Branch tips** consist of 4 blunt, rounded protrusions, bright yellow fading to pale yellow; bruises a pale wine-colour.
- **Stem** to 20 mm long x 10 mm thick, stout, white becoming pink towards branches, bruises a weak brown; aborted (undeveloped) branches present.
- Odour weakly fragrant.
- **Spore print** yellow-brown.

Note - the pink branches, fruity odour, and very upright structure of *Ramaria samuelsii* differentiates it from the similar-looking *R. anziana* (p 37).

Habit: gregarious.

Habitat: on the ground amongst humus, and leaf litter of eucalypt woodland and forest.



Richard Hartland

Ramaria stuntzii var. gelatinosa Red-tipped Cauliflower Coral

Fruit-body: medium, cauliflower-shaped; branches are pink to bright pink, and branch tips dry and bright red. The stem is hairy and the white flesh distinctly gelatinous.

- **Size** to 70 mm tall x 60 mm wide.
- Branches cylindrical, pink to bright pink, axils (branch divisions) narrowly rounded.
- Branch tips crowded, rounded, ending in several blunt protrusions, bright red, dry.
- **Stem** 20 mm long x 15 mm thick, stout, white becoming pinkish near branching, covered with white matted hairs; white aborted (undeveloped) branches present.
- **Spore print** yellow-brown.

 ${f Note}$ – the white flesh is distinctly gelatinous.

Habit: usually in a fairy ring but occasionally solitary.

Habitat: on the ground in leaf litter of dry eucalypt forests.



Richard Hartland

Ed Grey

Ramaria versatilis var. latispora Purple Vinaceous Coral

Fruit-body: large, multi-branched; branches are purple to vinaceous purple with blunt purple tips.

- Size to 120 mm tall x 80 mm wide.
- **Branches** 2-5 major branches, stout to 15 mm thick, purple to vinaceous purple to cinnamon (spore cover), axils (branch divisions) rounded.
- **Branch tips** short blunt processes, purple.
- **Stem,** where present, to 30 mm long x 20 mm thick, off-white.
- **Spore print** yellow-brown.

Note - flesh at base of stem stains yellowish. The 2-5 thick main branches of *Ramaria versatilis* var. *latispora* differentiate it from the similarly sized and coloured *R. fennica* var. *fumigata* (p 42) which has multiple, thinner branches.

Habit: solitary.

Habitat: on the ground amongst litter of eucalypt forests.



Pat Harrisson

Ramaria watlingii Pale Yellow Coral

Fruit-body: large, multi-branched; branches are dark straw-yellow to pale ochraceous, dichotomous branch tips are often at right-angles to one another.

- Size to 120 mm tall x 120 mm wide.
- Branches numerous, cylindrical to flattened, dark straw-yellow to pale ochraceous, axils (branch divisions) broadly-rounded.
- Branch tips bluntly rounded, dichotomous (divided into two) often at right angles, or an obtuse angle, yellow to very pale ochraceous.
- **Stem** to 30 mm long x 15 mm thick, white to yellowish; aborted (undeveloped) branches present.
- **Spore print** yellow-brown.

Note - no colour change with bruising. *R watlingii* is distinguished from other similar yellow species by the paired branch tips dividing at right angles to one another.

Habit: gregarious.

Habitat: amongst litter on disturbed ground by the roadside in dry eucalypt forest (Victoria) or cool temperate rainforest with Eucalypts (Tasmania).



Hai Wu (colour has faded with age)

Ramaria xanthosperma var.australiana Sulphur-tipped Coral

Fruit-body: large, multi-branched; branches are cream-coloured to ivory; branch tips are often palmate, sulphur-yellow; stem stains reddish when bruised.

- **Size** to 100 mm tall x 600 mm wide.
- Branches cylindrical, axils (branch divisions) narrowly rounded, creamcoloured to ivory.
- Branch tips finely divided, becoming palmate or mitten-shaped with age, sulphur-yellow.
- **Stem** to 20 mm long x 10 mm thick, white to off-white, pruinose when protected, stains reddish when bruised.
- Spore print yellow-brown.

Note – the unique combination of sulphur-yellow branch tips, white to ivory branches and reddish staining on the stem differentiates it from other Australian yellowish *Ramaria* in the group (*R. pyrispora* p 47, *R. subtilis* var. *microspora* (yet to be seen again, since it was first collected).

Habit: solitary.

Habitat: on ground in native sclerophyl forest and woodlands.



Clive Shirley

Ramaria zippelii (Phaeoclavulina zippelii) Blue-tipped Coral

Fruit-body: large, multi-branched; upright branches are buff and the tips occasionally blue tinted. All supported on a tall brownish stem.

- **Size** to 110 mm tall x 60 mm wide.
- Branches cylindrical, buff, smooth, axils (branch divisions) round and deeply u-shaped.
- Branch tips tapering, rounded, olivaceous buff tinted with a distinct greyishblue colour extending 5 mm down from tip.
- Stem to 45 mm high x 12 mm thick, cylindrical, robust, dark brown (umber), smooth to minutely felty; rhizomorphs absent.
- **Spore print** yellow-brown.

Habit: grouped in tufts, also forms rings.

Habitat: in ground

Ramaria filicicola (R. gracilis)



Carol Page



Reiner Richter Carol Page

Ramariopsis crocea Delicate Yellow Coral

Fruit Body: small, multi-branched; branches are fine, often antler-like and bright yellow to orange.

- Size to 50 mm tall x 20 mm wide.
- Branches to 1.5 mm thick, dichotomous (divided into two) becoming 'antler-like', yellow to orange, axils (branch divisions) round.
- Branch tips rounded, yellow.
- **Stem** to 30 mm x 2 mm thick, golden yellow to orange like the branches, base fluffy with white mycelium.
- **Spore print** white.

Note – the jelly *Calocera viscosa* Yellow Staghorn looks similar, but grows on wood, has a waxy texture and is viscid when fresh.

Habit: solitary or clustered.

Habitat: usually on the ground in moss and litter of native forests but also on Tree-fern stems.



John Eichler Richard Hartland

Ramariopsis kunzei White Coral

Fruit Body: medium, multi-branched; branches are white, thin, brittle, becoming pink-tinged with age, branch tips are blunt and two-pronged; stem white.

- **Size** to 80 mm tall x 70 mm wide.
- **Branches** to 2 mm thick, dichotomous (divided into two), slightly flattened, white, smooth, brittle and fragile, axils (branch divisions) round.
- Branch tips two blunt protrusions round to pointed, white, ageing yellowish.
- **Stem,** where present, to 10 mm long x 3 mm thick, white, scurfy with flakes and scales; arises from white basal mycelium and some white rhizomorphs.
- **Spore print** white.

Habit: solitary, in groups or small clusters.

Habitat: on the ground in litter of wet native forests and on *Dicksonia antarctica* Smooth Tree-fern stems.



Richard Hartland Reiner Richter

Ramariopsis pulchella Small Mauve Coral

Fruit Body: small, multi-branched; branches are thin supported on a thin stem. The whole fruit-body is mauve-purple to deep layender.

- **Size** to 20 mm tall x 15 mm wide.
- **Branches** to 1 mm thick, dichotomous (divided into two), rich mauve-violet, smooth, axils (branch divisions) deeply rounded.
- Branch tips two blunt protrusions, deep mauve.
- **Stem** short, to 15 mm thick, tapering slightly downwards, pale mauve to white at base, bruises brown; arises from a very small, pale mauve mycelial pad.
- **Spore print** white.

Habit: solitary or in small groups.

Habitat: on the ground in litter of wet native forests.



Clive Shirley

Ramariopsis ramarioides Small Red-brown Coral

Fruit-body: small, multi-branched like a tree; branches are stout, brown to rich red-brown, and divide into two.

- **Size** to 50 mm tall x 60 mm thick.
- **Branches** divide repeatedly (to 4 times), upright, dichotomous (divided into two) throughout, flesh-brown to red-brown, axils (branch divisions) round.
- Branch tips short, to 5 mm long, awl-shaped (slenderly pointed), concolourous with branches or redder.
- Stem to 20 mm tall x 4 mm thick, distinct, tapering downwards, at top concolourous with branches becoming pallid, pinkish tan ageing to chamois at base.
- **Spore print** white.

Habit: single or in small groups **Habitat**: on ground in native forests.



Reiner Richter

Ramariopsis simplex Thin Yellow Club

Fruit-body: medium, simple club; club is yellow with an elongated and thin structure which is distinct from the stem.

- **Size** to 70 mm tall x 4 mm thick.
- Club often laterally compressed, bright yellow-gold to light orange-yellow, distinct from stem.
- **Club tip** rounded, may be slightly paler than the club.
- **Stem** yellow to ochraceous-yellow; base has a thin covering of appressed white mycelium.
- Spore print white.

Note – its size, club shape and stem base distinguishes it from *Clavulinopsis amoena* (white mycelial pad) (p 22), *C. depokensis* (very flattened curved branches, tips sharply pointed, brown, white mycelial pad) (p 24) and *C. fusiformis* (clubs emerge in tight clusters) (p 25).

Habit: gregarius to subcaespitose in small groups (up to 4 indivials).

Habitat: on ground in native forests.

Clavulinopsis depokensis



Torbjorn von Strokirch

Clavulinopsis fusiformis



Alan Cressler



John Eichler Richard Hartland

Tremellodendropsis pusio Needle-branched Coral

Fruit Body: medium, multi-branched; branches are long, extremely slender, white, pinkish or pale buff with pointed tips, supported on a long, whitish stem.

- **Size** to 70 mm tall x 50 mm wide.
- **Branches** extremely slender, less than 1 mm thick, dichotomous (divided into two), upright, whitish, flesh-pink to pale buff, axils (branch divisions) acute.
- **Branch tips** pointed, whitish to pale buff.
- Stem to 11 mm long x 1 mm thick, tough, whitish to pale buff; base arises from a small, white mycelial patch.
- **Spore print** white.

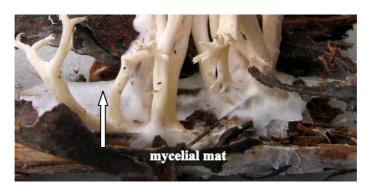
Note – stem and lower branches stain brownish.

Habit: groups.

Habitat: on the ground in native forests.

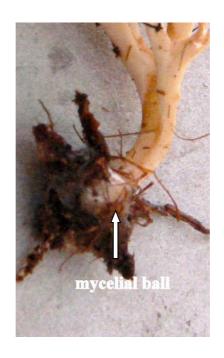
CORAL FUNGI MYCELIAL FORMS

In the book we note several types of mycelium attached to the stem bases of Coral fungi. The illustrations show some of these forms.











Tremellodendropsis pusio



Richard Hartland

Notes on the Yellow Ramaria Group

We note in *Ramaria pyrispora* that there are two other similar yellowish *Ramaria* species – *R. subtilis* var. *microspora* and *R. xanthosperma* var. *australiana*. AM Young notes that the specimens found were sent to the Edinburgh herbarium and no material was deposited in Melbourne. There are also no colour images. Below are some of the characters noted AM Young 2014, OMS web site

	Ramaria xanthosperma	Ramaria subtilis	
	var. <i>australiana</i>	var.microspora	
Fruit-body	100 x 600 mm	100 x 500 mm, fasciculate	
		tufts (ca 80 mm diam),	
Major branches	cream- to ivory-coloured	wholly yellow (chrome	
		yellow sensu Watling)	
Branch tips	sulphur-yellow, expanding	pure yellow (canary yellow	
(apices)	into palmate or mitten-	sensu watling), tapered but	
	shaped forms	rounded	
Stipe (stem)	20 x 10 mm, small, sharply	30 x 20 mm, stout, white	
	tapered to a rounded base,	(Petersen & Watling note	
	white to off-white stains	brunnescence - browning -	
	plum-coloured or carmine.	when handled or in age),	
Flesh	white, suffused red from	white	
	surface stains		
Habitat	wet sclerophyll forest. (but	forest	
	Hai Wu saw it in dry		
	eucalypt woodland)		
Known distribution	ACT (Blue Range Block, nr	ACT (Tidbinbilla Nature	
	Cotter Dam);	Reserve, April)	
	Vic (Gembrook, Olinda).	Vic (Gembrook, May).	
Notes	easily recognised by bright	wholly yellow apices and	
	sulphur-yellow branch tips	branches, but stem is white -	
	white to cream-coloured	thus separates the speces	
	branches and plum to reddish	from both Ramaria	
	stains on stipe.	lorithamnus and other	
		yellowish taxa	

R. pyrispora has flared pale tan to buff branches, with whitish pointed to rounded tips; stipe thick, tapering down to an acute somewhat hairy base, white. Not such a definite yellow colour as the above species.

Also note the following yellowish Ramaria spp.:

R. capitata var. capitata has swollen. almost fused together branch tips.

R. watlingii has dichotomous (divide into two) branch tips that are at right angles to one another.

SCIENTIFIC NAMES AND DERIVATIONS OF CORAL FUNGI

NAME Aphelaria

complanata

Artomyces

austropiperatus candelabrus colensoi

colensoi **Clavaria** acuta

alboglobospora

fragilis miniata tenuipes zollingeri

Clavicorona taxophila

Clavulina
cinerea
coralloides
cristata
rugosa
subrugosa
tasmanica
vinaceocervina

Clavulinopsis amoena

corallinorosacea

depokensis fuiformis sulcata

sulcata **Deflexula**fascicularis

Hericium coralloides clathroides

Macrotyphula

juncea **Mucronella** pendula **MEANING**

Away from the sun

flattened

Close to fungus southern peppery

candelabra

after William Colenso
Pertaining to club
acute, sharp pointed
white round spores

fragile

painted with red lead

thin stalked

named after Heinrich Zollinger

Crown-tipped Club likes a Yew (tree) Almost Clavaria ashen, ash-coloured similar to coral having a crest rugose (wrinkled)

almost rugose (wrinkled)

of/from Tasmania

wine-red to deer-brown **Resembling a Clavulina**

pleasant, cheerful

rosy coral

from Depok (Indonesian city)

spindle-shaped

longitudinally grooved Curving downwards like a small bundle

Pertaining to hedgehog

similar to coral

like iron grating or lattice

Large small cloud

like a rush

Small with a sharp tip

hanging down

NAME **MEANING** Multiclavula Many diminutive clubs mucida slimy pertaining to spring vernalis Phaeoclavulina A dark Clavulina Little wing Pterula gracilis slender Ramaria Pertaining to branches fir tree (associated with) abietina ?pertaining to elderly female anziana australiana var. australiana Australian botrytoides like a bunch of grapes botrytis Pertaining to a bunch of grapes capitata var.captitata related to head capitata var. ochraceorelated to head, vellowsalmonicolor salmon colour fennica var. fumigata of Finland; smoke-colour (grey with brown) like a fern stalk filicicola flaccida flaccid (limp) gracile (slender, thin) gracilis victor's wreath lorithamnus ochracea vellow pear-shaped spores pyrispora Samuels - mycologist samuelsii stuntzii var. gelatinosa after Daniel Elliot Stuntz, mycologist; gelatinous subtilis var. mircrospora delicate var. small spored versatile; large spored versatilis var. latispora after Roy Watling, mycologist watlingii xanthosperma var. australiana yellow-spored var. australian pointed or narrow end zippelii Ramariopsis Similar to Ramaria vellow like saffron (crocus) crocea Kunz - mycologist kunzei

crocea kunzei pulchella ramarioides simplex

Tremellodendropsis

pusio **Typhula**

Resembling a trembling tree

stalked

Small cloud

very beautiful

like a Ramaria

simple

SPORE SIZE AND SHAPE				
Species	Size	Shape	Ornamentation	Loc/Ref
Aphelaria	4.5-6.5x	globose, sub-	smooth	Cleland 1931
complanata	4-5.5 μm	globose to		(1976 reprint)
		broadly		
A	5 5 5	ellipsoid	£	Combonille
Artomyces	5-5.5x	broadly	finely roughened	Cambarville 2015
austropiperatus Artomyces	4-5 μm 4.5x3 μm	ellipsoidal ellipsoidal	finely roughened	Toorongo
colensoi	4.5χ5 μΙΙΙ	empsoidai	illiery roughened	Falls 2014
Clavaria	4.5-7x 2.5-	ellipsoidal	smooth	California
fragilis group	4 μm	empsoidar	Sinodii	Fungi
Clavaria	10-12x	elongate,	smooth	Mushroom
tenuipes	6-6.5 µm	ellipsoid		Observer 2013
Clavaria	5.5-6.5x	spherical to	smooth with short	Ned's Gully
zollingeri	4.5-5 μm	broadly ovate	hilar appendage	2016 sample
O		·		1
Clavicorona	3-4x	subglobose to	smooth	Phillips
taxophila	2-3 μm	broadly		(2006)
		ellipsoidal		
Clavulina	6-9.5x	globose to	smooth	2015 Bunyip,
cinerea	5.5-9 μm	subglobose		Wanderslore,
				Jumping
~.				Creek samples
Clavulina	7-11x	subglobose	smooth with	Dom Dom
coralloides	6.5-10 µm	1 1 1	apiculus	Saddle 2016
Clavulina	7-14x	subglobose to	smooth with	Dom Dom
rugosa	7.5-12 µm	broadly	apiculus	Saddle 2016
Clavulina	7-9x	elliptical	smooth with small	Kurths Kiln
subrugosa	6-7 μm	broadly ovate to broadly	apiculus	Kuruis Kiiii
suorugosa	0-7 μπ	elipsoidal	apiculus	
Clavulina	8.5-12.5x	subglobose to	smooth	Petersen
tasmanica	7-10.5 µm	very broadly	Sillootii	(1986)
	, 1010 pill	ellipsoidal		(1)00)
Clavulina	8-8.5(-9) x	subglobose to	smooth	Cleland 1916
vinaceocervina	7-8(9.5) µm	very broadly		
		ovoid		
Clavulinopsis	6-7x	Elipsoid to	smooth	Petersen 1988
amoena	4-4.5 μm	ovate		
Clavulinopsis	6-7x	ellipsoidal	smooth with small	Petersen 1988
corallino-	3.5-5 µm		hylar sppendage	
rosacea				

SPORE SIZE AND SHAPE				
Species	Size	Shape	Ornamentation	Loc/Ref
Clavulina depokensis	5.5-6.5x 4-5 μm	ellipsoid to ovate	smooth	Petersen (1979)
Clavulinopsis fusiformis	5-9x 4.5-9 μm	subglobose, globose to broadly ovate	smooth with prominent apiculus	Petersen (1968)
Clavulinopsis sulcata	8-8.5x 3.5-4 μm	subglobose, globose to broadly ovate	smooth	Ned's Gully 2014 sample
Deflexula fascicularis	9-10.5x9- 10 μm	globose	smooth	Australian Subtropical Fungi
Hericium coralloides	6-7x4.5-5.5 μm	elliptical to subglobose	smooth to finely punctate	Australian Subtropical Fungi
Macrotyphula juncea	7-10x 3.5-5 μm	ellipsoid	smooth	Mushroom Expert 2017
Mucronella pendula	6-9x 4.5- 6.7 μm	broadly elipsoid	smooth	Mycobank
Multiclavula mucida	4.5-7.5x 2-3 μm	cylindrical to sub-reniform	smooth	Petersen 1986
Multiclavula vernalis	6-8.5x 3-3.5 μm	cylindrical to sub-reniform	smooth	Petersen & Kantvilas 1986
Pterula gracilis	9-11x 4.5-6 μm	oblong	smooth	Mycobank
Ramaria abietina	6-8.5x 2.5-5 μm	pip-shaped to narrowly ellipsoidal	finely roughtened with prominent curved hilar appendage	Coburg 2015; Young 2014
Ramaria anziana	7-10.5x 3.5-5(6) μm	long oval or ellipoid	finely roughened (warts and ridges)	Blackwood 2016; qldfungi.org. au

SPORE SIZE AND SHAPE					
Species	Size	Shape	Ornamentation	Loc/Ref	
Ramaria australiana var. australiana	10.5-14.5x 3.5-5.5 μm	elongate, ellipsoid	finely roughened	Young 2014	
Ramaria botrytoides	9.5-12x 3.5-5 μm	ellipsoid to cylindrical	finely roughtened with prominent curved hilar appendage	Gembrook 2014, Black- wood 2015, Bunyip 2015	
Ramaria capitata var. capitata	10.5-15x 5-6 μm	broadly elipsoidal to cylindrical	finely roughened (warty)	Gembrook 2014 sample	
Ramaria capitata var. ochraceo- salmonicolor	8-13x 3.5-6 μm	broadly ellipsoidal to cylindrical	finely roughened (warty)	Cleland 1931 (1976 reprint), qldfungi.org. au	
Ramaria fennica var. fumigata	8-12(-13.5)x 4.5-6(-7) μm	elongate ellipsoid	finely roughened (warty) with prominent curved hilar appendage	Blackwood 2017; qldfungi.org. au	
Ramaria filicicola	(-5)6-7x 3-4.5 μm	ellipsoidal	finely roughened (warts and ridges) with prominent curved hilar appendage	Jumping Creek 2015 Young 2014	
Ramaria flaccida	6-9x 3-5.5 μm	elongate- ellipsoidal to tear-drop shaped	finely roughened (spiny)	Bunyip 2016; Mycobank web site	
Ramaria lorithamnus	6-7(-8.5)x 3.5-6 μm	nearly oval to ellipsoidal	finely roughened (warty)	Macedon 2015 sampl; qldfungi.org. au	
Ramaria ochracea	5.5-7x 2.5-4 μm	ellipsoidal to tear-drop shaped	finely roughened (spiny)	Badger Weir 2015 sample; Young 2014	

SPORE SIZE AND SHAPE					
Species	Size	Shape	Ornamentation	Loc/Ref	
Ramaria	8.5-10.5x	ellipsoid to	finely roughened	E Grey, J	
pyrispora	4.5-6 μm	elongate	(warty)	Hubregtse -	
		ellipsoid		Lorne 2017;	
				qldfungi.org.	
				аи	
Ramaria	8.5-12.5x	broadly	finely roughened	qldfungi.org.	
samuelsii	4.5-6 μm	ellipsoid to	(warty and	аи	
		elongate	ridged) with		
		ellipsoid	prominent curved		
	5 5 10 5		hilar appendage	1.10	
Ramaria	7.6-10.6x	narrowly	randomly	qldfungi.org.	
stuntzii var.	3.4-5.3 μm	ellipsoid	scattered low	аи	
gelatinosa Ramaria	9.5-12(-13)x	ellipsoidal	warts conspiculously	Mycobank	
versatilis var.	4-6 μm	empsoidai	roughened	web site;	
latispora	4-0 μπ		Toughelled	Young 2005	
Ramaria	8-12x	ellipsoid to	finely roughened	qldfungi.org.	
watlingii	4.5-6 µm	narrowly	(warty and	au	
waitingii	1.5 σ μπ	ellipsoid to sub-	ridged)	ш	
		cylindrical	liagea)		
Ramaria	11-13.5x	ellipsoid to	finely roughened	qldfungi.org.	
zippelii	6-7 µm	lacrymiform		au	
**		(tear-shape)			
Ramaria	11-13.5x	cylindrical	finely roughened	Young 2014	
xanthosperma	4.5-6 μm		(flattened warts or		
var. <i>australis</i>			ridges)		
Ramariopsis	2.5-3.5x	sub-globose	finely roughened	Ned's Gully	
crocea	2.5-3 μm			2015	
Ramariopsis	5.5-6x	ellipsoidal	finely roughened	Mount Worth	
kunzei	3.5 µm		(spiny)	2015	
Ramariopsis	3.5-4x	broadly	finely roughened	Petersen 1988	
pulchella · ·	3 μm 3.5-4.5x3-	ellipsoidal	(spiny)	D . 1000	
Ramariopsis		ovate to	finely roughened	Petersen 1988	
ramarioides Pamarionsis	3.5 µm 6-7x5-6.5	ellipsoid globose to	(spiny) smooth	Petersen 1988	
Ramariopsis simplex	0-7x3-0.3 µm	subglobose	SHIOOUI	r etersen 1900	
Tremelloden-	9.5-16x	oblong-ellipsoid	smooth	Crawford	
dropsis pusio	4.5-7 μm	obiolig-cilipsolu	SHIOOHI	1954	
aropsis pusio	τ.υ / μπ	<u> </u>	1	1/37	

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Ramaria ochracea



Torbjorn von Strokirch

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Ramaria Iorithamnus



Reiner Richter

Ramaria flaccida



De'ana Williams

INDEX OF SPECIES

Species	Page
Aphelaria complicata	8
Straw-head Aphelaria	8
Artomyces austropiperatus	10
Peppery Coral	10
Artomyces colensoi group	11
Delicate Peppery Coral	11
Brittle Club	12
Clavaria fragilis group	12
Buff Club	13
Clavaria tenuipes	13
Clavaria zollingeri	14
Violet Coral	14
Clavicorona taxophila	15
Fluted Trumpet	15
Ash-grey Coral	16
Clavulina cinerea	16
Clavulina coralloides	17
Clavulina cristata	17
Spiky Coral	17
Clavulina rugosa	18
Wrinkled Coral	18
Clavulina subrugosa	19
White Club	19
Clavulina tasmanica	20
Lumpy Club	20
Clavulina vinaceocervina	21
Dark-tipped Coral	21
Clavaria amoena	22
Clavulinopsis amoena	22
Yellow Club	22
Clavaria corallinorosacea	23
Clavulinopsis corallinorosacea	23
Rosy Coral Fungus	23
Bright Orange-yellow Club	24
Clavaria depokensis	24
Clavulinopsis depokensis	24
Clavaria fusiformis	25

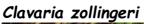
Species	Page	
Clavulinopsis fusiformis	25	
Golden Spindles	25	
Clavaria miniata	26	
Clavulinopsis sulcata	26	
Flame Fungus	26	
Clustered Icicle	28	
Deflexula fascicularis	28	
Pterula fascicularis	28	
Coral Tooth	29	
Hericium clathroides	29	
Hericium coralloides	29	
Fairy Club	30	
Macrotyphula juncea	30	
Icicle	31	
Mucronella pendula	31	
Multiclavula mucida	32	
White-Club Scum-Lover	32	
Multiclavula vernalis	33	
Orange-club Scum-lover	33	
Pterula gracilis	34	
Typhula gracillis	34	
White Spikes	34	
Green-staining Coral	36	
Phaeoclavulina abietina	36	
Ramaria abietina	36	
Orange and Salmon-pink Coral	37	
Ramaria anziana	37	
Ramaria australiana var. australiana	38	
Wine-red Coral	38	
Pink-tipped Coral	39	
Ramaria botrytoides	39	
Pale Cauliflower Coral	40	
Ramaria capitata var. capitata	40	
Ramaria capitata var. ochraceosalmonicolor	41	
Salmon-pink Cauliflower Coral	41	
Lavender Coral	42	
Ramaria fennica var. fumigata	42	
Pale Buff Coral	43	
Ramaria filicicola	43	

Species	Page
Ramaria gracilis	43
Mustard-yellow Coral	44
Phaeoclavulina flaccida	44
Ramaria flaccida	44
Ramaria lorithamnus	45
Yellow Tufted Coral	45
Delicate Coral	46
Phaeoclavulina ochracea	46
Ramaria ochracea	46
Flaring Branched Coral	47
Ramaria pyrispora	47
Ramaria samuelsii	48
Upright Pink Coral	48
Ramaria stuntzii var. gelatinosa	49
Red-tipped Cauliflower Coral	49
Purple Vinaceous Coral	50
Ramaria versatilis var. latispora	50
Pale Yellow Coral	51
Ramaria watlingii	51
Ramaria xanthosperma var. australiana	52
Sulphur-tipped Coral	52
Blue-tipped Coral	53
Phaeoclavulina zippelii	53
Ramaria zippelii	53
Delicate Yellow Coral	55
Ramariopsis crocea	55
Ramariopsis kunzei	56
White Coral	56
Ramariopsis pulchella	57
Small Mauve Coral	57
Ramariopsis ramarioides	58
Ramariopsis simplex	59
Small Red-brown Coral	59
Thin Yellow Club	59
Needle-branched Coral	61
Tremellodendropsis pusio	61

Ramariopsis pulchella



Paul George





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Clavaria tenuipes



John Eichler

Ramaria australiana var. australiana



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Ramaria botrytoides



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Deflexula fascicularis



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