# A LITTLE BOOK OF CORALS

#### **Pat and Ed Grey**



Ramariopsis pulchella

**Revision 3 (2018)** 

#### Ramaria flaccida



De'ana Williams

#### Introduction

This booklet illustrates some of the Coral Fungi found either on FNCV Fungi Forays or recorded for Victoria. 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. Each description page consists of a photo (usually taken by a group member) and brief notes to aid identification. The corals are listed alphabetically by genus and species and a common name has been included. In this revision five species have been added: *Clavicorona taxophila, Clavulina tasmanica, Ramaria pyrispora, R. watlingii* and *R. samuelsii*. 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 fruit-bodies.

Unlike fungi such as Agarics that have gills and Boletes that have pores, the fertile surface bearing the spores of coral fungi is the external surface of the upper branches. All species of *Artomyces, Clavaria, Clavulina, Clavulinopsis, Multiclavula, Ramariopsis* and *Tremellodendropsis* have a white spore print while *Ramaria* species have a yellow to yellow-brown spore print, which is sometimes seen when the mature spores dust the branches.

Most species grow on the ground except for two Peppery Corals *Artomyces* species and *Ramaria ochracea* that grow on fallen wood. *Ramaria filicicola* grows on woody litter and Tree-fern stems. Usually *Ramariopsis crocea* and *R. kunzei* grow on the ground in moss and litter, but occasionally on Tree-fern stems. *Multiclavula mucida* (on wood) and *M. vernalis* (on soil) grow in association with an alga to form a lichen.

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, however, differ in young specimens). Size relates to the whole fruit-body but the height is described as **tall** - 90 to 150 mm, **medium** - 50 to 90 mm **small** - 20 to 50 mm and **tiny** – 1 to 20 mm . A more detailed identification follows and includes habit and habitat

#### A QUICK FIELD INDICATION

ON GROUND	
CAULIFLOWER-SHAPED, LARGE (to 150 mm tall)	
Pale yellow – orange yellow, viscid	
Ramaria capitata var capitata	p 31
Salmon pink, non-viscid	
Ramaria capitata var ochraceosalmonicolor	p 32
CAULIFLOWER-SHAPED, MEDIUM (to 90 mm tall)	
Red	
Ramaria stuntzii var gelatinosa	p 40
CORAL-SHAPED, LARGE (to 150 mm tall)	
Buff, tips red to pale pink-reddish	
Ramaria botrytoides	p 30
Buff to pale tan	
Ramaria pyrispora	p 38
Lavender	
Ramaria fennica var. fumigata	p 33
Orange to salmon-pink	
Ramaria anziana	p 29
Pale to dark ash grey	
Clavulina cinerea	p 14
Pink, tips yellow	20
Ramaria samuelsii	p 39
Purple purple	
Ramaria versatilis var latispora	p 41
Straw yellow to pale ochre	
Ramaria watlingii	p 42
Violet to purple	
Clavaria zollingeri	p 12
CORAL-SHAPED, MEDIUM-SIZED (to 90 mm tall)	
Fawn with some dark tips	
Clavulina vinaceocervina	p 19
Mustard-yellow	
Ramaria flaccida	p 35
Yellow with wine-red bruising	
Ramaria lorithamnus	p 36
White with spiky tips	
Clavulina coralloides	p 15

CORAL-SHAPED, SMALL (to 50 mm tall)	
Green-yellow	
Ramaria abietina	p 28
Pale yellow to buff	
Tremellodendropsis pusio	p 46
Rich mauve	
Ramariopsis pulchella	p 45
Yellow	4.0
Ramariopsis crocea	p 43
White	n 1/
Ramariopsis kunzei	p 44
ON GROUND	
CLUB-SHAPED, TALL (to 150 mm tall)	
Red	•
Clavulinopsis sulcata	p 24
White, in exotic vegetation	17
Clavulina rugosa	p 16
White, in native vegetation  Clavulina fragilis group	p 10
Yellow	p re
Clavulinopsis amoena	p 20
Clavulinopsis fusiformis	p 23
CLUB-SHAPED, MEDIUM (to 90 mm tall)	
Buff	1.1
Clavaria tenuipes	p 11
Dark ash grey to grey-brown,	" 10
Clavulina tasmanica Orange-yellow	p 18
Clavulinopsis depokensis	p 22
Pink and red	P 22
Clavulinopsis corallinorosacea	p 21
White, in native vegetation	P = -
Clavulina subrugosa	p 17
CLUB-SHAPED, SMALL (to 50 mm tall)	
White, in native vegetation	1.0
Clavicorona taxophila	p 13
CLUB-SHAPED, TINY (to 20 mm tall)	
Orange, tiny	
Multiclavula vernalis	p 27

WOODY LITTER	
CORAL-SHAPED, LARGE (to 100 mm tall)	
Buff with white tips	2.4
Ramaria filicicola	p 34
SMOOTH TREE-FERN TRUNK	
CORAL-SHAPED, LARGE (to 120 mm tall)	
<b>Buff with white tips</b>	
Ramaria filicicola	p 34
CORAL-SHAPED, MEDIUM (to 90 mm tall)	
White	
Ramariopsis kunzei	p 44
CORAL-SHAPED, SMALL (to 50 mm)	
Yellow, delicate	
Ramariopsis crocea	p 43
DEAD WOOD	
CORAL-SHAPED, LARGE (to 120 mm tall)	
Whitish to fawn	
Artomyces austropiperatus	p 8
CORAL-SHAPED, MEDIUM (to 90 mm tall)	
Whitish to fawn, delicate	
Artomyces colensoi	p 9
CORAL-SHAPED, SMALL (to 50 mm)	
Pale ochre	
Ramaria ochracea	p 37
CLUB-SHAPED, TINY (to 20 mm tall)	
White	
Multiclavula mucida	p 26
	1

Ramariopsis pulchella



Paul George

#### Clavulinopis depokensis



Richard Hartland



De'ana Williams

## Artomyces austropiperatus Peppery Coral

Fruit-body: large, multi-branched, with crown-like tips, whitish, pink beige or fawn. The larger of two very similar corals that grow on wood.

- **Size** to 120 mm tall x 80 mm wide.
- **Branches** upright, to 6 mm diameter, usually divide twice at each division forming 4 new branches, whitish, pink beige or fawn.
- Branch tips crown-like (coronate), whitish to fawn.
   Stem to 20 mm tall x 4 mm diameter, concolourous with branches.
- **Spore print** white.

**Note** – Immediate or delayed, strong, persistent peppery taste. Often multiple fruit-bodies grow close together.

Habit: gregarious and grouped close together.

**Habitat**: on wood in wet native forests.



Ed Grey

## Artomyces colensoi group Delicate Peppery Coral

Fruit-body: medium, multi-branched, with crown-like tips, whitish to fawn. The smaller of two very similar corals that grow on wood.

- **Size** to 60 mm tall x 15 mm wide.
- **Branches** upright, very fine, less than 1mm diameter, usually divide twice, each division, forming 4 new branches, whitish to fawn.
- **Branch tips** crown-like (coronate), whitish to fawn.
- **Stem** to 10 mm tall x 1.5 mm diameter.
- **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.

Habit: gregarious and grouped close together.

**Habitat**: on wood in wet native forests.





De'ana Williams

Richard Hartland

## Clavaria fragilis Group Brittle Club

Fruit-body: tall, simple club, growing in a clump with all the clubs joined together at the base (caespitose), white, very brittle.

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

**Note** – group includes *C. fragilis, C. alboglobospora* and *C. acuta* that can only be securely separated on microscopic grounds. However, *C fragilis* typically grows in dense clusters while *C. acuta* grows singly or in small groups.

**Habit**: 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, pale yellow to buff, with a distinctly darker stem.

- **Size** to 85 mm tall x 5 mm diameter.
- Club simple or once branched, longitudinally grooved, pale yellow to buff, smooth.
- **Club tip** rounded to flattened, pale yellow to buff.
- Stem distinct, tapering towards base, 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 with rounded branch tips and a short stem, violet to purple (ageing brown).

- Size to 100 mm tall x 70 mm wide.
- **Branches** to 6 mm diameter, usually dichotomous (divide into two), grey-purple, 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.

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, longitudinally striate, flaring out at apex looking frilly, snow-white.

- Size to 30 mm tall x 6 mm diameter at apex, narrowing to 2 mm diameter 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, usually single fruit-bodies, occasionally paired.

Habitat: on the ground amongst litter in dry eucalypt forests after heavy rain.



Richard Hartland Ed Grev

#### Clavulina cinerea Ash-grey Coral

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

- **Size** to 120 mm tall x 60 mm wide.
- Branches to 10 mm wide, ash-grey, with a hint of purple when infected, smooth to wrinkled, or longitudinally grooved.
- **Branch tips** fat and blunt or slightly crested, maybe 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 a tinge of purple and the embedded perithecia should be visible as black dots under a hand lens.

**Habit**: solitary or gregarious.

**Habitat**: on the ground in eucalypt and exotic forests.



Paul George Pat Grey

## Clavulina coralloides (Clavulina cristata) Spiky Coral

Fruit-body: large, sparingly branched, branches with spiky tips, white, occasionally with pink tinges, ageing ochre to brownish.

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

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

Habit: solitary or gregarious.

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



Ed Grey

#### Clavulina rugosa Wrinkled Coral

Fruit-body: tall, unbranched to sparsely branched and contorted, white, always grows with exotic vegetation.

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

**Note** – Unlike *Clavulina subrugosa*, it is never 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 and the embedded perithecia should be visible as black dots under a hand lens.

Habit: solitary or gregarious.

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



Ed Grey Reiner Richter

#### Clavulina subrugosa White Club

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

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

**Note** – never found in exotic vegetation like *C. subrugosa*, nor does it grow in caespitose groups like the *Clavaria fragilis* group.

Habit: solitary or clustered.

Habitat: on the ground, always in eucalypts forests.



Charlie Price

Richard Hartland

#### Clavulina tasmanica Lumpy Club

Fruit-body: small to medium, irregular, lumpy club, deep ash-grey with a whitish to tan bloom, widening at top, often split into paler tan tips.

- Size to 25 (70) mm tall to 5 (7) mm diameter
- **Club** irregular, can be simple to sparsely branched, single, in pairs or occasionally in threes, lumpy, greyish-brown with whitish to tan bloom.
- **Club tip** splits at the apex into 2-6 finger-like forms, pale tan.
- Stem short, to 4 mm diameter, pale, arises from a 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 and irregularly branched, pink to fawn. There are always some branches with dark tips.

- **Size** to 100 mm tall x 60 mm wide.
- Branches variable, often flattened and short, stout, pink to fawn, wrinkled and knobby.
- **Branch tips** blunt or acute and thorn-like, dark (vinaceous).
- Stem to 10 mm tall, whitish, arises from a small tangle of white mycelium.
- **Spore print** white.

**Note** - there are always some dark tips to identify the species, 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, cylindrical, occasionally flattened, bright yellow to orange.

- **Size** to 100 mm tall x 5 mm diameter.
- Club simple, cylindrical but often flattened and grooved, bright yellow to orange.
- **Club tip** blunt, sometimes forked.
- **Stem** to 17 mm long x 3 mm diameter, translucent pale yellow, arises from a small whitish mycelial patch.
- **Spore print** white.

**Note** – unlike *C. depokensis* it is not twisted, although sometimes flattened.

Habit: clustered 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, pale pink to reddish with a distinct red stem.

- **Size** to 80 mm tall x 3 mm diameter.
- **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 diameter, red in contrast to the paler pink fertile top.
- **Spore print** white.

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

**Habit**: gregarious in small groups.

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



De'ana Williams

## Clavulinopsis depokensis (Clavaria depokensis) Bright Orange-yellow Club

Fruit-body: medium, simple club, bright orange to yellow, flattened and twisted.

- **Size** to 80 mm tall x 7 mm diameter (much less when unbranched).
- **Club** simple, cylindrical or flattened, commonly twisted, bright orange to yellow, waxy or smooth.
- Club tip tapered or rounded, sometimes divided.
- Stem very short to 5 mm long, narrower than club, lemon-yellow, a few may unite to form a single body, arises from a yellow to orange mycelial pad.
- Spore print white.

**Note** – unlike the yellow *C. amoena*, it is twisted.

Habit: clustered in groups.

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





Web: en. Wikipedia.org

web: Nature and More @Alan Cressler

## Clavulinopsis fusiformis (Clavaria fusiformis) Golden Spindles

Fruit-body: tall, simple, bright yellow clubs with brown tips. Clubs emerge in tight clusters from an underground fused base.

- **Size** to 150 mm tall x 10 mm diameter.
- **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** – unlike *C. amoena*, the clubs emerge in tight clusters.

Habit: clustered.

**Habitat**: on the ground in native forests.



Ed Grey Reiner Richter

## Clavulinopsis sulcata (Clavaria miniata) Flame Fungus

Fruit-body: tall, simple, occasionally some branching, red to orange club and red to orange stem.

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

**Note** – unlike the pink and red *C. corallinorosacea*, it is always completely red.

Habit: clustered in groups.

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

Clavulinopsis sulcata



Claire Ferguson



John Eichler

## Multiclavula mucida White-club Scum-lover

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

- **Size** to 15 mm tall x 2 mm diameter.
- **Club** simple or once-branched, often flattened, white to cream, smooth.
- Club tip rounded, may brown when dehydrated.
- **Stem** distinguished from the club by its narrower size and more translucent colour, arises from a minute white mycelial pad integrated with the alga.
- **Spore print** white.

**Note** – *Multiclavula vernalis* grows in algal scum on soil and has orange clubs.

**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, slender simple club, usually unbranched, pale orange with a distinctly paler stem. Often with a small white spot at the apex, like a cap. A lichenised fungus growing on soil with a *Coccomyxa* alga.

- **Size** to 20 mm tall x 2.5 mm diameter.
- **Club** simple, pale orange, smooth.
- **Club tip** bluntly rounded.
- Stem to 7 mm long x 1.5 mm diameter, narrower than club, and whitish, arises from a minute white mycelial pad.
- **Spore print** white.

**Note** – *Multiclavula mucida* grows on algal scum on wood and has whitish clubs.

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



Ed Grey Marc Campobasso

## Ramaria abietina (Phaeoclavulina abietina) Green-staining Coral

Fruit-body: small, multi-branched, yellowish, staining green all over.

- **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 diameter, 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, numerous orange or salmonpink branches with yellow tips arise from a compound stem.

- Size to 110 mm tall x 85 mm wide.
- Branches upright, slender, cylindrical, smooth or (rarely) finely grooved, orange to salmon-pink, arising from a stem, aborted (undeveloped) branches present, 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 diameter, thin, often compound (several small stems fusing to form a false stem), smooth to pruinose (finely powdery), pale at the base becoming orange or salmon-pink above.
- Spore print yellow-brown.

**Note** -R. *anziana* is differentiated from the similar-looking R. *samuelsii* by the thin, sometimes false stem, orange fruit-body and lack of fruity odour.

Habit: gregarious.

**Habitat**: on the ground in litter of eucalypt forests.



Pat Grey Richard Hartland

## Ramaria botrytoides Pink-tipped Coral

Fruit-body: large, multi-branched, branches buff, branch tips pale pink to reddish or pink buff.

- Size to 120 mm tall x 110 mm wide.
- Branches long and buff-coloured, main axils (branch divisions) round.
- **Branch tips** with blunt protrusions, pale pink to reddish or pink buff.
- **Stem** short, to 40 mm long x 15 mm diameter thick, white to buff-coloured.
- **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 small groups.

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



Paul George

## Ramaria capitata var capitata Pale Cauliflower Coral

Fruit-body: large, cauliflower-shaped, viscid, pale yellow orange-yellow. The stem is short and off-white.

- **Size** to 150 mm tall x 150 mm wide.
- **Branches** finely grooved longitudinally, pale yellow, axils usually acute.
- Branch tips swollen and almost fused together to form layers or a completely closed surface, yellow.
- Stem short to 20 mm long x 10 mm diameter, solid, rounded, hairy, off-white.
- **Spore print** yellow-brown.

**Note** – The fruit-body stains brown when bruised and soil particles often adhere to the viscid fruit-body, unlike the non-viscid *R. capitata* var *ochraceosalmonicolor*.

Habit: solitary to gregarious.

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



Richard Hartland

#### Ramaria capitata var. ochraceosalmonicolor Salmon-pink Cauliflower Coral

Fruit-body: large, cauliflower-shaped, not viscid, salmon-pink.

The stem is short and off-white.

- **Size** to 150 mm tall x 150 mm wide.
- Branches grooved longitudinally, salmon-pink to apricot-pink, axils (branch divisions) usually acute.
- **Branch tips** fuse together to form a completely closed surface, buff to yellowish-orange.
- Stem short, to 20 mm long x 10 mm diameter, rounded, off-white, hairy.
- **Spore print** yellow-brown.

**Note** – the fruit-body stains brown when bruised. This variety is not viscid like *R. capitata* var *capitata* and soil particles do not adhere to the fruit-body.

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 with tapering branch tips, lavender to violet-purple, ageing to clay-pink with yellow-brown spores showing as brownish patches.

- **Size** to 140 mm tall x 80 mm wide.
- **Branches** to 4 mm diameter, cylindrical, becoming elongated with maturity, axils (branch divisions) round, lavender to purple.
- **Branch tips** tapered, with two to four blunt protrusions, lavender to purple.
- **Stem** short, to 40 mm long x 25 mm diameter, white at base, becoming lavender near first branching.
- **Spore print** yellow-brown.

**Note** – although similar in colour to *Clavaria zollingeri* it has a larger fruit-body and different shaped branch tips. *R. versatilis* var. *latispora* is also a similar size and colour but has fewer (2-5) and thicker (to 15 mm diameter) main branches.

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, buff with white tapered tips.

- **Size** to 100 mm tall x 60 mm wide.
- **Branches** are very upright, buff, axils (branch divisions) usually round.
- **Branch tips** tapered with 2-5 sharp points or blunt protrusions, dull white.
- Stem short to 20 mm long x 5 mm diameter, pale buff, mostly smooth, arises from a white mycelial mat with abundant white root-like rhizomorphs, both attached to the 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 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 Treefern stems.



De'ana Williams Carol Page

## Ramaria flaccida (Phaeoclavulina flaccida) Mustard-yellow Coral

Fruit-body: medium, multi-branched, branches are upright and branch tips finely pointed, mustard-vellow.

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

**Habit**: grows 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: medium, multi-branched, yellow, with a small whitish stem. The fruit-body stains red-brown and tends to grow in clusters.

- Size to 90 mm tall x 40 mm wide (tufts to 80 mm wide).
- **Branches** mostly upright, cylindrical, axils (branch divisions) round, yellow, ageing buff, smooth.
- Branch tips dichotomous (divide into two) with rather blunt prongs, pale yellow.
- **Stem** to 25 mm long x 4 mm diameter, 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: small, delicate, branched, with pointed branch tips, cream to pale ochre. One of the four coral fungi that grows on wood.

- **Size** to 50 mm tall x 25 mm wide.
- **Branches** upright, to 1.5 mm diameter, fine and delicate, axils (branch divisions) round, cream to pale ochre.
- Branch tips pointed, usually dichotomous (divided into two) whitish, ageing pale tan.
- Stem to 30 mm long x 6 mm diameter, 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, off-white tips with blunt protrusions.

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

**Note** – Does not colour when bruised. *R. pyrispora* can be differentiated from the similar-looking *R. filicicola* by the absence of a mycelial mat attached to woody litter.

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, very upright pink branches with yellow tips, arising from a distinct stout stem.

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

**Note** - the stout stem, pink branches, fruity odour, and very upright structure of *R. samuelsii* differentiates it from the similar-looking *R. anziana*.

**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, 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, white aborted (undeveloped) branches present.
- Branch tips crowded, rounded, ending in several blunt protrusions, dry, bright red.
- Stem 20 mm long x 15 mm diameter, stout, white becoming pinkish near branching, covered with white matted hairs.
- **Spore print** yellow-brown.

Note – flesh white and distinctly gelatinous.

Habit: 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, with blunt branch tips, and branches purple to vinaceous purple.

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

**Note** - flesh stains yellowish at base of stem. The 2-5 thick (to 15 mm diameter) main branches differentiate it from the similarly sized and coloured *R. fennica* var. *fumigata* with its multiple, thinner branches.

Habit: solitary.

**Habitat**: on the ground amongst litter of eucalypt forests.



© P Harrisson Queensland Mycological Society

### Ramaria watlingii Pale Yellow Coral

Fruit-body: large, multi-branched, branches dark straw-yellow to pale ochraceous, tips often branch at right angles, yellow to very pale ochre, ageing brown.

- Size to 120 mm tall x 120 mm wide.
- Branches numerous, cylindrical to flattened, dark straw-yellow to pale ochraceous, aborted (undeveloped) branches present.
- **Branch tips** bluntly rounded, dichotomous (divide into two) often at right angles, or at an obtuse angle, yellow to very pale ochraceous.
- **Stem** 30 mm long x 15 mm diameter, white to yellowish. Rhizomorphs not recorded
- **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).





Reiner Richter Carol Page

## Ramariopsis crocea Delicate Yellow Coral

Fruit Body: small, delicate and branched, bright yellow to orange.

Branches are often antlers-like.

- **Size** to 50 mm tall x 20 mm wide.
- **Branches** to 1.5 mm diameter, dichotomous (divide into two) becoming 'antler-like', axils (branch divisions) round, yellow to orange.
- **Branch tips** blunt not pointed, yellow.
- **Stem** to 10 mm long x 2 mm diameter, golden yellow to orange, base fluffy with white mycelium.
- **Spore print** white.

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

Habit: solitary or clustered.

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



John Eichler Richard Hartland

## Ramariopsis kunzei White Coral

Fruit Body: medium, multiple thin branches with blunt two-pronged branch tips and a short stem, white becoming pink-tinged with age.

- **Size** to 80 mm tall x 70 mm wide.
- **Branches** to 2 mm diameter, dichotomous (divide into two), axils (branch divisions) round, slightly flattened, white, smooth, brittle and fragile.
- **Branch tips** two blunt protrusions, white ageing yellowish.
- Stem if present, to 10 mm long x 3 mm diameter, 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 Smooth Tree-fern stems.



Richard Hartland Reiner Richter

## Ramariopsis pulchella Small Mauve Coral

Fruit Body: small, thin branches and a short, thin stem. The whole fruit-body is mauve.

- **Size** to 20 mm tall x 15 mm wide.
- **Branches** to 1 mm diameter, dichotomous (divide into two), axils (branch divisions) deep round to round, rich mauve-violet, smooth.
- **Branch tips** two blunt protrusions, deep mauve.
- **Stem** short, to 1.5 mm diameter, tapering slightly downwards, pale mauve to white at base, 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.





John Eichler Richard Hartland

### Tremellodendropsis pusio Needle-branched Coral

Fruit Body: small, branches long, extremely slender, whitish to pale buff with pointed tips, and a long, whitish stem.

- Size to 50 mm tall x 50 mm wide.
- **Branches** extremely slender, less than 1 mm diameter, dichotomous (divide into two), upright, axils (branch divisions) acute, whitish to pale buff.
- Branch tips pointed, whitish to pale buff.
- Stem to 11 mm long x 1 mm diameter, tough, whitish to pale buff, 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.

Tremellodendropsis pusio



Richard Hartland

### SCIENTIFIC NAMES AND DERIVATIONS

**NAME** 

**MEANING** 

Artomyces

austropiperatus

colensoi **Clavaria** 

acuta

alboglobospora

fragilis miniata tenuipes

zollingeri

Clavicorona taxophila

Clavulina

cinerea
coralloides
cristata
rugosa
subrugosa
tasmanica
vinaceocervina

Clavulinopsis

amoena corallinorosacea

depokensis fuciformis sulcata

Multiclavula

mucida vernalis

Phaeoclavulina

ochracea

Ramaria

abietina anziana botrytoides

> capitata var. capitata capitata var. ochraceo-

> > salmonicolor

fennica var. fumigata

filicicola

Close to fungus

southern peppery 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** 

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 many diminutive clubs

slimy

pertaining to spring

a dark clavulina

yellow

pertaining to branches

fir tree (associated with)
?pertaining to elderly female

like a bunch of grapes

related to head

related to head, yellow-

salmon colour,

of Finland; smoke-colour (grey mixed with brown)

like a fern stalk

#### MEANING

#### Ramaria cont.

**NAME** 

flaccida

gracilis

lorithamnus

ochracea

stuntzii var gelatinosa versatilis var latispora

watlingii

Ramariopsis crocea

kunzei pulchella

Tremello dendrops is

pusio

flaccid (limp)

gracile (slender, thin)

victor's wreath

yellow

after Daniel Elliot Stuntz, mycologist; gelatinous

versatile; large spored

after Roy Watling, mycologist

similar to Ramaria

yellow like saffron (crocus)

Kunz - mycologist very beautiful

resembling a trembling tree

stalked

Ramaria filicicola (R. gracilis)



Carol Page

#### **BIBLIOGRAPHY**

- Arora D (1986). Mushrooms Demystified. Ten Speed Press, California USA.
- Bougher, N & Syme K (1998). *Fungi of Southern Australia*. Frank Daniels P/L Perth.
- Cleland, JB (1976 reprint). *Toadstools and Mushrooms and Other Larger Fungi of South Australia*. Government Printer, SA.
- Fuhrer, Bruce (2011). *A field guide to Australian fungi*. Bloomings Books Melbourne Australia.
- Gates, G & Ratkowsky D (2014). *A Field Guide to Tasmanian Fungi*. The Tasmanian Field Naturalists Club: Hobart.
- Hubregtse, Jurrie (2012). *The Fungi CD: Fungi in Australia* [CD-ROM] 3<sup>rd</sup> Edition. FNCV Fungi Group.
- McCann, IR (2003). *Australian fungi illustrated*. Macdown Productions: Victoria.
- Nelsen, MP (2005). Noteworthy Collection Michigan, The Michigan Botanist 46.
- Petersen, JH (2012). *The Kingdom of Fungi*. Princeton University Press: New Jersey, USA
- Petersen, RH (1986). Three Lichen-forming Clavarioid Fungi from Tasmania, *Australian Journal of Botany* 34, 217-22.
- Petersen, RH (1978). The Genus Clavaria in South-eastern Australia, *Australian Journal of Botany* 26, 415-424.
- Petersen, RH (1978). The Genus Ramariopsis in South-eastern Australia, *Australian Journal of Botany* 26, 425-431.
- Phillips, R (2006). Mushrooms. Macmillan London.
- Young, AM (2005). *A Field Guide to the Fungi of Australia*. University of New South Wales Press: Sydney.
- Young, AM (2014). Australian Coralloid Fungi IV *Ramaria filicicola*, *Muelleria* 33: 13-19.

#### WEB SITES

first-nature.com - articles by species names.

Hubregtse, Jurrie (2017) Fungi in Australia - e-book

landcareresearch.co.nz - articles by species names.

mushroomexpert.com - articles by species names.

mycobank.org - articles by species names.

mycoweb.com - articles by species names.

qldfungi.org.au - Young, AM Keys to the Published Australian species of Ramaria.

qldfungi.org.au - articles by species names.

wikipedia.org - articles by species names.

### Acknowledgements

Page design adapted from Bougher N.L. (2006). Perth Urban Bushland Fungi Field Book. Perth Urban Bushland Fungi, Perth Western Australia. (Online), from: http://www.fungiperth.org.au/fieldbook/cat\_index.html (2 February 2007).

To Pam Catcheside and Dr A Young for reading the booklet and making suggestions.

Great assistance given to us by the photographers who allowed us to use their photographs.



Ed Grey

#### INDEX OF SPECIES

INDEX OF SPECIES			
Species	Page	Species	Page
Artomyces austropiperatus	8	Orange-club Scum-lover	27
Artomyces colensoi	9	Pale Buff Coral	34
Ash-grey Coral	14	Pale Cauliflower Coral	31
Bright Orange-yellow Club	22	Pale Yellow Coral	42
Brittle Club	10	Peppery Coral	8
Buff Club	11	Phaeoclavulina abietina	28
Clavaria fragilis group	10	Phaeoclavulina flaccida	35
Clavaria amoena	20	Phaeoclavulina ochracea	37
Clavaria corallinorosacea	21	Pink-tipped Coral	30
Clavaria cristata	15	Purple Vinaceous Coral	41
Clavaria depokensis	22	Ramaria abietina	28
Clavaria fusiformis	23	Ramaria anziana	29
Clavaria miniata	24	Ramaria botrytoides	30
Clavaria tenuipes	11	Ramaria capitata var. capitata	31
Clavaria zollingeri	12	Ramaria capitata var.	32
Clavicorona taxophila	13	och race os almonicolor	
Clavulina cinerea	14	Ramaria fennica var. fumigata	33
Clavulina coralloides	15	Ramaria filicicola	34
Clavulina rugosa	16	Ramaria flaccida	35
Clavulina subrugosa	17	Ramaria gracilis	34
Clavulina tasmanica	18	Ramaria lorithamnus	36
Clavulina vinaceocervina	19	Ramaria ochracea	37
Clavulinopsis amoena	20	Ramaria pyrispora	38
Clavulinopsis corallinorosacea	21	Ramaria samuelsii	39
Clavulinopsis depokensis	22	Ramaria stuntzii var gelatinosa	40
Clavulinopsis fusiformis	23	Ramaria versatilis var. latispora	41
Clavulinopsis sulcata	24	Ramaria watlingii	42
Dark-tipped Coral	19	Ramariopsis crocea	43
Delicate Coral	37	Ramariopsis kunzei	44
Delicate Peppery Coral	9	Ramariopsis pulchella	45
Delicate Yellow Coral	43	Red-tipped Cauliflower	40
Flame Fungus	24	Rosy Coral Fungus	21
Flaring Branched Coral	38	Salmon-pink Cauliflower Coral	32
Fluted Trumpet	13	Small Mauve Coral	45
Golden Spindles	23	Spiky Coral	15
Green-staining Coral	28	Tremellodendropsis pusio	46
Lavender Coral	33	Upright Pink Coral	39
Lumpy Club	18	Violet Coral	12
Multiclavula mucida	26	White Club	17
Multiclavula vernalis	27	White Coral	44
Mustard-yellow Coral	35	White-Club Scum-Lover	26
Needle-branched Coral	46	Wrinkled Coral	16
Orange and Salmon-pink Coral	29	Yellow Club	20
		Yellow Tufted Coral	36