

Diversity and valorisation of proliferating brown seaweeds from the Dictyotaceae family in Tahiti coral reefs

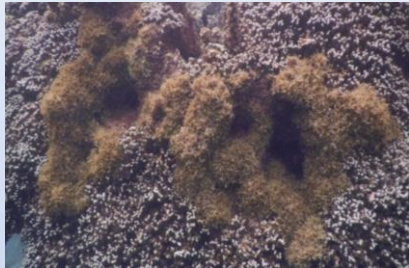
Tohei Theophilus¹, Claude Payri², Christophe Vieira³, Mayalen Zubia^{1*}

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French Polynesia

Proliferation of brown seaweeds in the lagoon of Tahiti

Fucales: studied since the 80's

Dictyotaceae

Proliferation? → observations

Rich in active molecules (chemical defenses)

Objectives

Specific diversity of the lagoon of Tahiti

Proliferation dynamics of Dictyotaceae

Identification of active molecules

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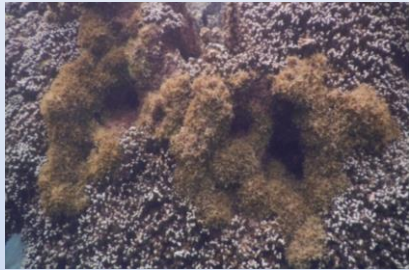
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Diversity of Phaeophyceae

	Number of species	
	2006	2018
Dictyotales (18)		
<i>Dictyopteris</i> (J.V. Lamouroux)	1	-
<i>Dictyota</i> (J.V. Lamouroux)	4	4
<i>Lobophora</i> (J. Agardh)	1	7
<i>Padina</i> (Adanson)	2	3
<i>Spatoglossum</i> (Kützinger)	1	1
Ectocarpales (5)		
<i>Chnoospora</i> (J. Agardh)	2	2
<i>Colpomenia</i> ((Endlicher) Derbès & Solier)	1	1
<i>Hydroclathrus</i> (Bory)	1	1
<i>Rosenvingea</i> (Børgesen)	1	1
Fucales (2)		
<i>Sargassum</i> (C. Agardh)	1	1
<i>Turbinaria</i> (J.V. Lamouroux)	1	1
Total	16	22

Markers: rbcl, psaA, psbA, psaB, cox1, cox3, tufA

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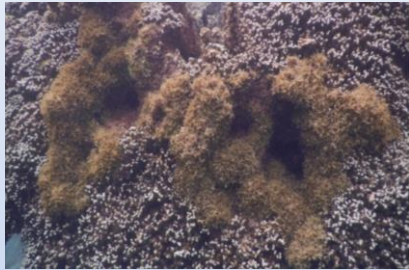
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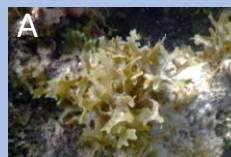
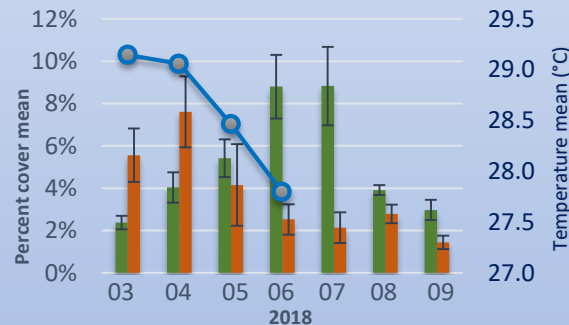
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Valorization of Dictyotaceae

Population dynamics



Austral winter
Dictyota bartayresiana (green)



Austral summer
Spatoglossum asperum (red)

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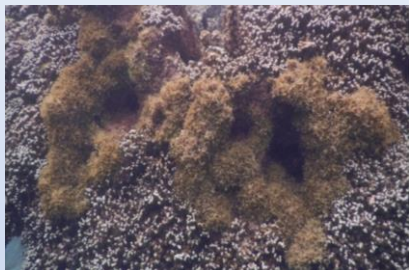
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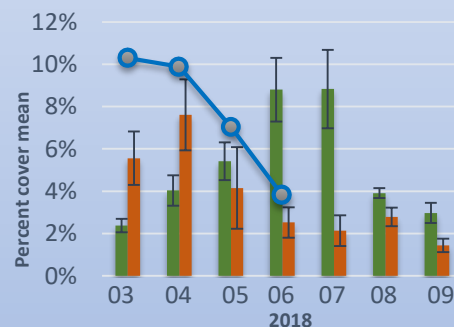
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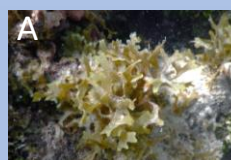
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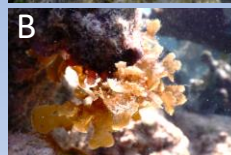
Population dynamics



Biotechnological potential



Austral winter
Dictyota bartayresiana (green)



Austral summer
Spatoglossum asperum (red)

	A	B
Antifouling		++
Antimicrobial	++	+
Antioxidant	++	++
α-glucosidase		
Acetylcholinesterase	+	+
Tyrosinase		

Petek et al. 2016. Cosmétopée.

Markers: rbcl, psaA, psbA, psbB, cox1, cox3, tufA