

CHAPTER 6

RESULTS

Taxonomic Treatment

Discolichens are a group of lichen-forming fungi (Ascomycota) which are classified by means of morphological, anatomical and chemical characters. Characters which are used here include color of apothecia, presence of lecanorine or lecideine apothecia and color of ascospores their septation. In the most recent outline, discolichens contain 7 orders and 30 families (Lumbsch & Huhndorf, 2010, pp. 16-44). In this study 2 orders, 11 families, 15 genera and 50 species were determined from approximately 700 collected specimens (see Table 7).

A dichotomous key to groups using characters of thallus structure, sexual reproductive structures and chemistry served as the basis for classification. Keys to species are presented for each genus. The species description, include the basionym and is based on the material cited.

Discolichens in this study comprise 2 orders, 11 families: Lecanorales with Brigantiaeaceae, Haematommataceae, Lecanoraceae, Lecideaceae, Megalariaceae, Malmideaceae, Pilocarpaceae and Ramalinaceae; Teloschistales with Letrouitiaceae, Megalosporaceae, Teloschistaceae.

Order Lecanorales

Lecanorales, an order of the Ascolichens, which produces the apothecia on their upper surface from which ascus and ascospores are occurred. In this study it include 8 families such Brigantiaeaceae, Haematommataceae, Lecanoraceae, Malmideaceae, Megalariaceae, Lecideaceae, Pilocarpaceae and Ramalinaceae.

Key to Order of Discolichens at PWLS

- 1a. Asci apically without an amyloid internal wall thickening, apothecia mostly without anthraquinones, K- or at most K+ yellow.....
.....Lecanorales
- 1b. Asci apically with a thick amyloid internal wall thickening, apothecia often with anthraquinons, K+ purple, violet, deep red.....
.....Teloschistales

Key to Families of Discolichens at PWLS

- 1a. Apothecia lecideine2
- 1b. Apothecia lecanorine or biatorine3
- 2a. Ascospores simple, asci *Lecidea*-type Lecideaceae
- 2b. Ascospores simple to multiseptate or 1-septate, asci otherwise
.....4
- 3a. Ascospores 1-septate, asci *Lecanora* or *Biatora*-type

.....	Megalariaceae
3b. Ascospores simple to multiseptate, asci <i>Micarea</i> -type	
.....	Pilocarpaceae
4a. Ascospores polarilocular	
.....	Telochistaceae
4b. Ascospores not polaribilocular, apothecia lecanorine or biatorine.....	
.....	5
5a. Apothecia lecanorine.....	6
5b. Apothecia biatorine.....	7
6a. Ascospores fusiform.....	Haematommataceae
6b. Ascospores simple.....	Lecanoraceae
7a. Ascospores non-septate, halonate.....	Malmideaceae
7b. Ascospores septate or submuriform to muriform.....	8
8a. Disc orange-yellow, ascospores submuriform to muriform.....	9
8b. Disc brown to black or reddish-brown, ascospores transversely (1-) 2- many septate.....	10
9a. Paraphyses simple, rarely branched, ascospores multicelled- muriform.....	Brigantiaeaceae
9b. Paraphyses slightly branched and anatomizing, submuriform or multicelled-muriform	Letrouitiaceae
10a. Ascospores transversely (1-) 2-many septate, acicular, ellipsoid or bacillary	Ramalinaceae
10b. Ascospores 1-many septate.....	Megalosporaceae

Table 7

Discolichens were Reported 2 Orders, 11 Families, 15 Genera and 50 Species.

Order	Family	Species
Lecanorales	Brigantiaeaceae	<i>Brigantiaea leucoxantha</i>
	(see chapter 7)	
	Haematommataceae	<i>Haematomma</i> cf. <i>africanum</i> , <i>H. collatum</i> ,
	(see chapter 8)	<i>H. flexuosum</i> , <i>H. wattii</i> and <i>H.</i> PL.1
	Lecanoraceae	<i>Lecanora achroa</i> , <i>L. argentata</i> , <i>L. austrotropica</i> ,
	(see chapter 9)	<i>L. flavoviridis</i> , <i>L. helva</i> , <i>L. leprosa</i> , <i>L. phaeocardia</i> ,
		<i>L. subimmersa</i> , <i>L. toroyensis</i> , <i>L. tropica</i> , <i>L. vainioi</i> ,
		<i>Lecidella carpathica</i> , <i>L. elaeochroma</i> , <i>Maronina</i>
		<i>orientalis</i> , <i>Ramboldia deficiens</i> , <i>R. heterocarpa</i> ,
		<i>R. russula</i> , <i>R.</i> cf. <i>siamensis</i> , <i>R. siamensis</i> , <i>R.</i> PL.1
Teloshistales		and <i>Vainionora flavidorufa</i>
	Lecideaceae	<i>Bellemerea</i> PL.1
	(see chapter 10)	
	Malmideaceae	<i>Malmidea bakeri</i> , <i>M. coralliformis</i> ,
	(see chapter 11)	<i>M. duplomarginata</i> , <i>M. eeuuae</i> , <i>M. microspora</i> ,
		<i>M. perplexa</i> , <i>M. piae</i> and <i>M.</i> PL.1
	Megalariaceae	<i>Catillochroma melanotropa</i>
	(see chapter 12)	
	Pilocarpaceae	<i>Micarea melaena</i>
	(see chapter 13)	
Teloshistales	Ramalinaceae	<i>Bacidia convexula</i> , <i>B. incongruens</i> and
	(see chapter 14)	<i>B. subannexa</i>
	Letrouitiaceae	<i>Letrouitia domingensis</i> , <i>L. transgressa</i> and
	(see chapter 15)	<i>L. vulpina</i>
	Megalosporaceae	<i>Megalospora tuberculosa</i>
	(see chapter 16)	
	Teloschistaceae	<i>Caloplaca bassiae</i> , <i>C.</i> aff. <i>ferruginea</i> ,
	(see chapter 17)	<i>C. flavorubescens</i> , <i>C. testaceorufa</i> and <i>C.</i> PL.1