

천문동 자생지의 식물상 및 식생구조 특성

한국한의학연구원 : 추병길, 지윤의, 문병철, 김보배, 이아영, 이혜원, 김호경*

Flora and Structure Characteristics of Vegetation in Native *Asparagus cochinchinensis* (Lour.) Merr.Korea Institute of Oriental Medicine : Byung Kil Choo, Yunui Ji, Byeong Cheol Moon, Bo-Bae Kim, Sungwook Chae, A-Yeong Lee, Hye-Won Lee and Ho-Kyoung Kim*Objectives

The objective of this study was to offer a scientific information for gene conservation and development of *Asparagus cochinchinensis* through analysis of distribution and habitats characteristics.

Materials and Methods

From June to November 2007, 2 m × 2 m quadrat was established in native *Asparagus cochinchinensis* in order to record a dominants and coverage, and evaluate the vegetation structure of community by the phytosociology method, made out floristic composition table and drew up the profile.



Fig. 1. Native habitat of *Asparagus cochinchinensis*.

Results

1. The flora of the studied area in Native *Asparagus cochinchinensis* was listed as 130 species. Native *Asparagus cochinchinensis* consisted of woody plants(47 species) like that *Pinus thunbergii* and *Quercus mongolica*, and herbaceous plants(83 species) like that *Lonicera japonica* and *Atractylodes japonica*. Native *Asparagus cochinchinensis* was found in Seungeon-ri, Anmyeon-eup, Taean-gun, Chungnam of the west coast, and Galgot-ri, Nambu-myeon, Geoje-si, Gyeongnam of the south coast.

Corresponding author : Ho Kyoung Kim E-mail hkkim@kiom.re.kr Tel : 042-868-9502

2. The vegetation of Native *Asparagus cochinchinensis* was classified into *Pinus thunbergii* community and typical community. *Paederia scandens* and *Lonicera japonica* was found out most of quadrat (Table 1). In the *Pinus thunbergii* community, coverage of upper tree layer, lower tree layer, shrub layer and herb layer were 62%, 14%, 37% and 92%, and differential species was *Ligustrum ovalifolium* and *Smilax china*. and it was located at low altitudes (average 44m) and south face (average 187°). In the typical community, coverage of lower tree layer, shrub layer and herb layer were 25%, 24% and 80%, and average altitude was lower than *Pinus thunbergii* community by 20. and it was located at south face (average 187°).

Table 1. Vegetation table of plant community in native *Asparagus cochinchinensis*.

Survey area	5	6	7	20	13	10	14	21	11	12	15	9	17	8	16	3	1	2	4	18	19	
Altitude	23	27	26	48	70	42	27	45	75	76	26	13	26	12	25	14	13	14	13	29	25	
Direction	250	320	290	145	178	34	178	148	165	185		33	181	31	188	150	150	150	150	185	184	
Slop degree	35	15	17	32	32	5	38	35	35	37	39	40	30	35	38	5	5	5	5	20	20	
Coverage of upper tree layer	75	80	75	80	75	80	60	80	35	30	10	0	0	0	0	0	0	0	0	0	0	
Coverage of lower tree layer	0	0	0	40	20	10	40	20	10	8	5	40	40	0	0	3	80	85	0	0	0	
Coverage of shrub layer	5	70	80	30	60	7	35	40	65	10	10	55	20	80	30	5	10	30	5	0	0	
Coverage of herb layer	98	85	75	60	70	98	90	35	98	98	90	98	95	90	90	75	80	80	80	75	35	
Number of appearance	31	29	24	25	19	29	23	24	21	18	22	28	15	18	11	25	23	32	11	9	7	
Scientific name	Pinus thunbergii community											Typical community										
<i>Pinus thunbergii</i> T1	5	5	5	4	4	4	4	3	3	3	2A											
<i>Pinus thunbergii</i> T2				2A	2A	+			2A	2A												
<i>Pinus thunbergii</i> S			+																			
<i>Pinus thunbergii</i> H				+	+			+		+	+											
<i>Ligustrum ovalifolium</i> T2				2A	2A																	
<i>Ligustrum ovalifolium</i> S				2A	2B		2A		3	1	+				2A							
<i>Ligustrum ovalifolium</i> H				R	2A		1		2A													
<i>Smilax china</i> H	+	1	+	+		+			1													
<i>Asparagus cochinchinensis</i> H	2B	2A	2A	2A	2A	2A	2B	2A	2A	2A	3	2A	3	2A	3	4	2A	2B	2B	3	2A	
<i>Paederia scandens</i> H	3			2A	+		2A	+	+	+	2A	1	+	1		1	+	2A		2A		
<i>Lonicera japonica</i> H			2A		2A	+	+		2A	2A	2A	1	+		2A	+	2A	2A			+	
<i>Cocculus triobus</i> H	+	+	+		+	+										2B	1	2A	+			
<i>Chrysanthemum boreale</i> H					1		3			1	3	2A	5	+	3			2A				
<i>Pittosporum tobira</i> S					3		2B		3	2A	2A	1		+								
<i>Pittosporum tobira</i> H					2B		2A		2B	2A	+	+	+	+								
<i>Atractylodes japonica</i> H	R	+	+	1				+									+	+	+			
<i>Quercus serrata</i> T2																		+				
<i>Quercus serrata</i> S												2A						+		+		
<i>Quercus serrata</i> H	+	+	+																			
<i>Quercus variabilis</i> T1						2B		2B														
<i>Quercus variabilis</i> T2						2A		2A												2A		
<i>Quercus variabilis</i> S								2A														
<i>Quercus variabilis</i> H				+		+		+										+		+		
<i>Carpinus turczaninowii</i> T2												3	3									
<i>Carpinus turczaninowii</i> S						+						2B	2A	5	2A							
<i>Carpinus turczaninowii</i> H																		+	+			
<i>Aster scaber</i> H	+	+	+			+																
<i>Zanthoxylum piperitum</i> S																				+		
<i>Zanthoxylum piperitum</i> H	R	R	R																	R		

Conclusions

Asparagus cochinchinensis is considered as high value plant as indicator species and medicinal herb, however its habitat is located at a coastal cliff and now being destroyed. Therefore proper management is needed for the conservation of *Asparagus cochinchinensis* native habitat.