

ABSTRACT

METHODS

Salak Mountain was a new expanded conservation area of Gunung Halimun National Park, still lack information on soil fauna, especially on Collembola. So far, only three species has been reported to occur in this area such as *Acanthurella javana*, *Folsomina candida* and *Folsomides parvulus*. Though that Collembola has important role as a decomposer in ecosystem and can be used as bioindicator, inventory of this group is needed to explore their diversity in this area. This research conducted in five vegetation type (primary, secondary, *Agathis*, shrub and open area), during July 2009 and standard sampling methods were used. Total specimens number collected was 3841, consist of 14 families, 55 genera or 82 species. Each habitat type indicated different number of individual: soil (901), litter (2361) and surface floor (579). The species *Folsomina* sp. 2 was collected in high individual number (primary: 400; secondary: 500, *Agathis*; 59, shrubs 80, open area none). The genus *Folsomina* was inhabitant in humid litter layer, and this favourable micro habitat did not find in open area for them. The three known species from Salak were found during this investigation. The rest species (79) supposed to be new record for Salak, some for Jawa or Indonesia, and very possible some of them can be promoted as new species, but further study on taxonomical must be done. Most of the families can be found at all of vegetation type, except Arrhopalitidae (*Arrhopalites* sp.) only in shrub and Brachystomellidae in *Agathis*. Most of the genus has overlapped distribution among habitat, but some of them figured seem to be typical on certain type. Some species only collected from soil samples: (*Mimoderus* (?) sp., *Lepidocyrtus* sp 6., *Hypogastrura* sp.); litter: (*Ptenothrix* sp. 1 and *Papiriodes* sp. and *Cyphoderus* sp.); and surface floor: (*Acrocyrtus eurylabialis*, *A. Javana*, *A. Javanicus*, *Lepidocyrtus callolepis*, *L. Malayanus*, and *L. Medius*).

Study sites

Habitat type



Collection and sampling

Different equipment for different habitat type (surface floor, litter, soil layer) has been used. Five points of each collecting method in each vegetation type has been operated to collect Collembola samples. Collecting method has been used:

- Surface floor species: Aqua plastic cup used as pitfall traps, 1/3 fill with alcohol 95%, operated for 3 days in the field, 5 traps in each vegetation type were operated.
 - Litter species: litter samples size 25x25cm, 0-5cm depth, 5 samples of each vegetation type were taken
 - Soil species: soil samples size 25x25cm, 5-10cm depth, 5 samples of each vegetation type were taken.
- Berlese Funnel has been used for sorting the animals from litter and soil sample. All materials was operated in Berlese Funnel for 7 days in laboratory.



RESULT

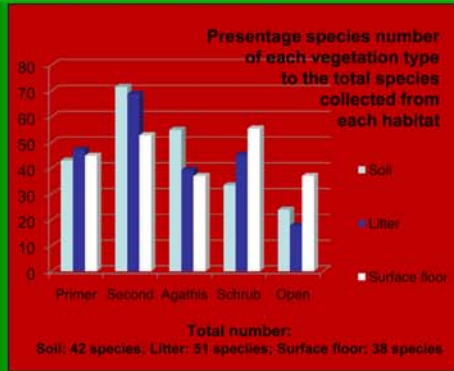
Table 1. Number of specimens, families, genera, species from each habitat and each vegetation type

Soil						
Data	Primer	Second	Agathis	Shrub	Open	Total
Specimens	128	225	125	71	30	579
Families	7	8	7	4	4	10
Genera	14	22	20	12	7	30
Species	18	30	23	14	10	42
Litter						
Data	Primer	Second	Agathis	Shrub	Open	Total
Specimens	653	1103	222	369	14	2361
Families	7	10	7	9	5	13
Genera	16	28	15	19	7	40
Species	24	35	20	23	9	51
Surface floor						
Data	Primer	Second	Agathis	Shrub	Open	Total
Specimens	175	244	101	245	136	901
Families	6	7	8	8	5	10
Genera	10	13	11	13	11	26
Species	17	20	14	21	14	38
Total number for the whole vegetation type						
Specimens	3841 individuals					
Families	14 families					
Genera	55 genera					
Species	82 species					

Table 2. List of families found in each vegetation type

Data	Primer	Second	Agathis	Shrub	Open
1. Arrhopalitidae					Li
1. Brachystomellidae			Sf		
1. Bourletellidae		So,Sf	Sf	Li, Sf	
1. Cyphoderidae		Li	So		
1. Dicyrtomidae	Sf	Sf	So,Sf	Li, Sf	Li,Sf
1. Entomobryidae	So, Li, Sf	So,Li, Sf	So,Li, Sf	So,Li, Sf	So,Li, Sf
1. Hypogastruridae	So,Li, Sf	So,Li, Sf	So,Li, Sf	So,Li, Sf	Li
1. Isotomidae	So,Li, Sf	So,Li, Sf	So,Li, Sf	So,Li, Sf	So,Sf
1. Neanuridae	So,Li	So,Li	So,Li	Li, Sf	Li,Sf
1. Neelidae	So	So,Li			
1. Onychiuridae		Li	Li		Li
1. Paronellidae	So,Li, Sf	So,Li, Sf	So,Sf	So,Li, Sf	Sf
1. Sminthuridae	So,Li	So,Li	So,Li, Sf	So,Li	So,Li
1. Sminthurididae	So,Li, Sf	So,L, Sf	Li	So, Sf	
Total	9	12	12	9	8

So: soil; Li: litter; Sf: Surface floor



Examples of some collected Collembola families



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