

Computer-assisted Pollen Databank: A New Method to Identify Bee Plants

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Vorwohl (1968) suggested a modern system for pollen determination in honey-pollen analyses. This key is used in a modified form on an EDV-System for Administration of a pollen databank and as a first step in pollen determination.

The system uses a databank of many different pollens (plants). This can be seen and used at

http://www.bfl.gv.at/institut/bienen/pollen/ndx_po.htm. Selection is made with the 'Vorwohl-key' as a help in determination (Table 1). This simplifies the work of pollen analyses.

Possible uses are scientific research (wherever pollen is of interest: bees, environmental research, plant biodiversity, botany, paleobotany,

Table 1. Vorwohl key for pollen identification

Length	Class	Breadth	N colpi	Class	Kind of colpi	Class	Exine	Class	Aggregation	Class
<=10	1	<=10	=1	1	Pore	1	psilat, faveolat, fossulat	1	=1	1
11-15	2	11-15	=2	2	Fold	2	scabrat, ferrucat, gemmat	2	=2	2
16-20	3	16-20	=3	3	Porefold	3	echinat	3	=3	3
21-25	4	21-25	=4	4	Syncolpat	4	clavat, baculat	4	=4	4
26-30	5	26-30	=5	5	Heterocolpat	5	rugulat, striat	5	=5	5
31-35	6	31-35	=6	6		6	reticulat	6	=6	6
36-40	7	36-40	=7	7		7	fenestrat	7	=7	7
41-50	8	41-50	>7	8		8		8	=8	8
>50	9	>50	0	9		9		9	>8	9

criminalistic, pollination, medicine, etc.); routine analyses of bee products (quality, origin, value of bee pasture, etc.); and medicine (pollen-warning system, allergy sensitisation, etc.)

Future aspects include REM-pictures and phytogeographic data; possible links to other pollen information on the internet; network databank for all interested persons (in preparation); and 'if you bring data, you can use data'.

Safety aspects include all plants having to be determined by a plant specialist named in the databank; one herbarium specimen with flowers and enough pollen for four slides (different methods) and one REM-preparation; the herbarium specimen to be deposited in an international botanical museum.

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References

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