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On Image Database File HANABACHI Based on the Japanese Bees ^{1), 2)}

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Abstract. An image database file HANABACHI based on the Japanese bees is constructed and is open to the public on Internet. Each record is composed of 16 items, i.e., scientific names (family, genus and species), Japanese name, distribution data, type locality, type depository, source of the original description, synonymy, morphological notes, remarks, flying season, visiting or associated flowers, natural enemy and images. The images include the whole body, head in frontal view, mesoscutum, propodeum, metasomal terga and so on. A home page of the HANABACHI is presented. It is managed by a management system SIGMA.

Key words: bioinformatics, entomology database, network, public use, Japanese bees, images, HANABACHI, SIGMA, Internet.

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We have produced three main insect databases, KONCHU, MOKUROKU and DJI at Computer Center of Kyushu University (present: Computing and Communications Center, Kyushu University) since 1983 and have opened to the public on Internet as well as from Computer Center of Kyushu University (Tadauchi, 1987, 1994, 1996, 2000; Tadauchi *et al.*, 1999; Tadauchi & Inoue, 2000a, b). The KONCHU (= insects in Japanese) is a taxon-based bibliographical entomology database based on main Japanese entomological and zoological journals. The present image database file HANABACHI (= bees in Japanese) is one of the KONCHU and a special file including detailed data of Japanese bees such as taxonomy, biology and distribution with various images of the body. Each record is composed of 16 items, i.e., scientific names (family, genus and species), Japanese name, distribution data, type locality, type depository, source of the original description, synonymy, morphological notes, remarks, flying season, visiting or associated flowers, natural enemy and various images. If a user clicks one of the images in the image menu, he or she can get the enlarged image and can examine detailed morphology. It is relatively difficult for non-specialists to identify some groups of bees. However it will be helpful for them to identify by using the images. They are essentially composed of the whole body, the head in frontal view, the mesoscutum, the propodeum, and the metasomal terga for each sex in this file. It is written mainly in English with Japanese and managed by a text database management system SIGMA working at a workstation in the Entomological Laboratory, Kyushu University.

The home page of the HANABACHI is presented in Figs. 1-3. The usage of the SIGMA system is explained in Arikawa *et al.* (1987, 1988).

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Fig. 1. A home page of an image database HANABACHI based on the Japanese bees in English version. A Japanese version is also available.

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Items of Data

Data and Tags are the Following 16 items.

1. (FTAX) family (scientific name, including subfamily name)
 2. (GTAX) genus (scientific name, including subgenus name)
 3. (STAX) species (scientific name, including subspecies)
 4. (JTAX) Japanese name
 5. (DST) distribution (Japan inland; overseas)
 6. (TYPE) type (sex)
 7. (TYPEL) type locality
 8. (TYPED) depository of the type
 9. (DESC) source of the original description
 10. (SYN) synonymy
 11. (MOR) morphological notes
 12. (REM) remarks
 13. (FLY) flying season
 14. (PL) visiting or associated flowers
 15. (PAR) parasites
 16. (IMG) images (total and partial images)
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Copyright Notice

Entomology Database Project Group (Head: Osamu Tadauchi) holds the copyright on the entomology database HANABACHI.

Inquiries and Comments

Inquiries and Comments about HANABACHI Should be the Following E-mail Address.

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Link

- [Entomology Database KONCHU](#)
- [A Check List of Japanese Insects \(MOKUROKU\)](#)
- [Dictionary of Japanese Insect Names \(DJI\)](#)
- [Full Text Database ESAKIA file \(Esakia, Kyushu University Publications in Entomology\)\(Japanese only\)](#)



Fig. 2. A home page of an image database HANABACHI in English version. Sixteen items are included in one record.

Example of Record - Netscape

ファイル(F) 編集(E) 表示(V) ジャンプ(G) Communicator(C) ヘルプ(H)

ブックマーク 場所: konchudb.agr.kyushu-u.ac.jp/hanabachi/exec/example-e.html 関連サイト

prostomias

Family	Andrenidae, Andreninae	
Genus	<i>Andrena</i> (<i>Calomelissa</i>)	
Species	<i>prostomias</i> Perez, 1905	
Japanese name	Utsugi-himehanabachi	
Distribution (Japan Inland; Overseas)	Japan (HONSHU,SHIKOKU,KYUSHU)	
Type (Sex)	female	
Type locality	Yokohama, Japan (M. Harmand)	
Type depository	Mus. d'Hist. nat. Paris	
Source of original description	<i>Andrena prostomias</i> Perez, 1905, Bull. Mus. d'Hist. nat. Paris, 11: 34 (female)	
Synonymy		
Morphological notes	Clypeus reflected apically and flat and shiny in female, yellow maculae in male. Vertex well developed with dark brownish hairs, genal area broadly smooth and shiny. Facial fovea dark brownish above. Propodeal enclosure large, less rugose with lateral margins convex outwardly in the middle. Metasoma smooth and shiny with microscopical fine punctures.	
Remarks	Endemic species to Japan. There are closely related species, <i>Andrena pieli</i> Xu et Tadauchi, in China and a smaller species, <i>Andrena tsukubana</i> Hirashima, in Japan and Korean Peninsula. It frequently nests in great aggregations and the population of Gakuonji Temple in Santo-cho, Hyogo Prefecture is designated as one of natural treasures in Hyogo Pref. It is a narrowly oligolectic species associated with <i>Deutzia</i> in Saxifragaceae.	
Flying season	Female: late May to late June; Male: late May to mid June	
Visiting or associated flowers	Saxifragaceae: <i>Deutzia</i> : <i>Deutzia crenata</i> ; <i>Deutzia sieboldiana</i>	
Natural enemy	Diptera: <i>Zodion cinereum</i> ; Coleoptera: <i>Meloe coarctatus</i> , <i>Meloe coarctatus</i>	
Images	Male	
	Female	
	 Whole body Head in frontal view Mesoscutum Propodeum Metasoma	 Whole body Head in frontal view Mesoscutum Propodeum Metasoma

検索が完了。

Fig. 3. Example of result of a search of the image database HANABACHI. This shows the data of *Andrena prostomias*. A user can examine enlarged images by selecting one of the lines in the image menu.

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