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Tadauchi, Osamu

Dawut, Ahmatjan

Inoue, Hitoshi

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

Osamu TADAUCHI

Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, 812-8581 Japan

Ahmatjan DAWUT

Entomological Laboratory, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Fukuoka, 812-8581 Japan

and

Hitoshi INOUE

Computing and Communications Center, Kyushu University, Fukuoka, 812-8581 Japan

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.

- Scarch HANABACHI database
 How to Use
 Items of Data
 Example of a Record

- Copyright Notice
- Inquiries and Comments
- Link

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
- distribution (Japan inland; overseas) 5. (DST)
- 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)

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.

Database HANABACHI (Osamu Tadauchi) Entomological Laboratory, Faculty of Agriculture, Kyushu University

Fukuoka, 812-8581 Japan

Phone: +81-92-642-2838 FAX: +81-92-642-2839

E-mail: tadauchi@agr.kyushu-u.ac.jp

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.

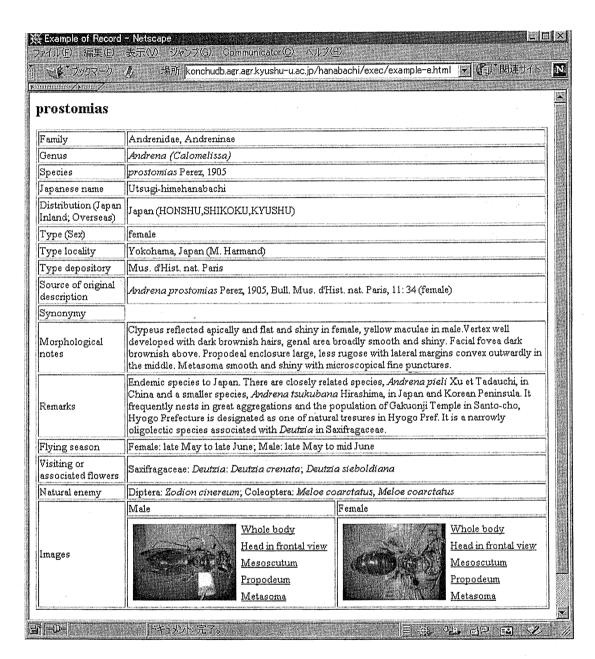


Fig. 3. Example of result of a search of the image database HANABACHI. This shows the data of *Andrena prostomias*. A user can examine enlarged images by selecting one of the lines in the image menu.

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