

愛媛県で採集されたショウジョウバエの目録

A list of drosophilid flies collected in Ehime prefecture, Japan.

加藤雄大 和多田正義

Takehiro K. Katoh, Masayoshi Watada

愛媛大学理工学研究科環境機能科学専攻

Department of Environmental Function Science, Graduate School of Science and Engineering, Ehime University, 2-5 Bunkyo-cho, Matsuyama, 790-8577, Japan

ABSTRACT

We collected drosophilid flies from 2011 to 2012 in Ehime prefecture, Japan and summarized our and the previous records. In the present study, 82 species of the drosophilid flies were recorded in our collection, and 19 species belonging to 9 genera of them were newly recorded in Shikoku. The new records were comprised of the species of *Stegana*, *Leucophenga*, *Paraleucophenga*, *Dichaetophora*, *Mycodrosophila*, *Phorticella*, *Chymomyza*, *Hirtodrosophila* and *Lordiphosa*. As a result, a total of 101 species belonging to 20 genera of the Drosophilidae were recorded from the present and previous surveys in Ehime prefecture.

Key words: *the Drosophilidae, faunal survey, new records, Shikoku*

Drosophilid fauna of Japan is better known compared with other regions of the world. The extensive survey of drosophilid flies throughout Japan was made by Kikkawa and Peng (1938) followed by Okada (1956), Wakahama (1964), Takada (1971) and Moriwaki (1979). Okada (1988) summarized collection data of the previous surveys including his own records. The number of drosophilid flies was 256 species belonging to 25 genera in Japan. Since 1988, several researchers recorded 60 species of drosophilid flies including 32 of the newly described species in Japan. Finally, a total of 312 species of the Drosophilidae were recorded from Japan (Toda, 2012). However, surveys of drosophilid flies were made intensively in the limited areas. The extensively surveyed areas are Hokkaido, central part of Japan (e.g., Tokyo) and subtropical islands (Kume-jima, Iriomote-jima and the Ogasawara Islands). Hokkaido is one of the most explored area in which 120 species of drosophilid flies

were recorded by Okada (1988) and additional 29 species were recorded by several studies (Toda, 2012). Beppu (2000, 2005, 2006) has made the faunal and ecological surveys of drosophilid flies in Tokyo, and a total of 100 species were collected in these studies. As a result, 138 species were recorded from Tokyo (Okada, 1988; Mitsui, 1973; Beppu, 2006). In Ryukyu Islands, a total of 107 species were collected from Kume-jima and Iriomote-jima (Okada, 1965; Hirai et al., 2000; Kondo and Kimura, 2008). Watada et al. (2011) discussed the temporal change of drosophilid fauna in Ogasawara Islands based on the previous and their own collection data. They reported 26 species including seven endemic species in the Ogasawara Islands. As a result, a total 117 species of drosophilid flies were recorded in the subtropical islands of Japan (Toda, 2012)

Only few information of the drosophilid fauna has been known from the western mainland of Japan (Chugoku, Shikoku and Kyushu). In Ehime prefecture, a few surveys on

2013年1月11日 受理

drosophilid flies had been made mainly by banana trap collection (Moriwaki, 1979). The distribution records from Okada (1988) showed 53 species belonging to 10 genera of drosophilid species were from Ehime prefecture. However, the records gave no information of collection methods, dates and localities in the prefecture. Watada et al. (2000) surveyed abundance of *Drosophila albomicans* and drosophilid fauna by banana bait traps in 21 localities in Ehime prefecture. In the study, 20 species of flies belonging to genus *Drosophila* and *Scaptodrosophila* were recorded. Hoshina and Watada (2001) collected 24 species belonging to *Drosophila*, *Scaptodrosophila* and *Styloptera* by banana traps in five localities in Ehime. By net sweeping collections, Katoh and Watada (2011) studied drosophilid fauna at two localities (Mt. Mikiji and Dogo Park) in Matsuyama, and recorded large numbers of species and genera (a total 52 species belonging to 15 genera including two new species). The previous studies have recorded 75 species belonging to 16 genera in Ehime. In the present study, we recorded additional 21 species and three genera of drosophilid flies in Ehime prefecture.

Fly collection was made by net sweeping and banana bait traps at various localities in Ehime prefecture. The trap collections were made by the "retainer" type traps (Toda, 1977). Fermented bananas by dry yeast were used for the traps. The monthly collection was made by both net sweeping and bait trapping in Matsuyama (Mt. Mikiji and Dogo Park) from April 2011 to April 2012. The occasional net sweeping was made in Komenono experimental forest of Ehime university, Matsuyama on September 2009, and Nametoko in Uwajima on October 2010 and 2012. The present and three previous studies provided the information of collection data, so we reported collection localities and methods for all species recorded in Ehime prefecture. Collection localities are shown in Figure 1.

A total of 82 species belonging to 19 genera were recorded

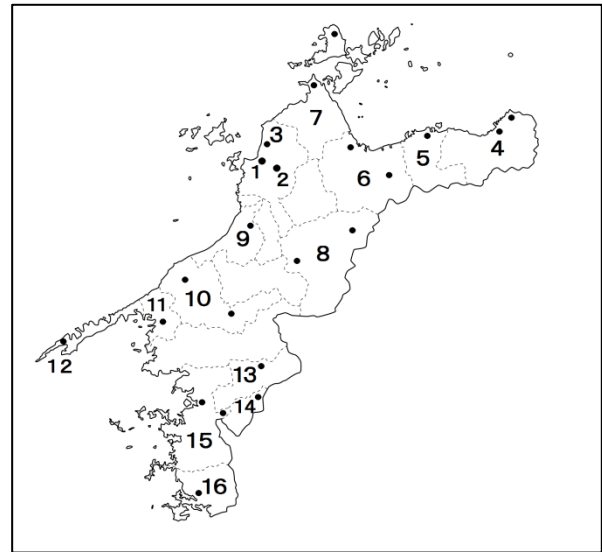


Figure 1. Geographical distribution of collection localities in Ehime prefecture.

Numbered localities correspond to follows: **1** Mt. Mikiji, **2** Dogo Park, **3** Matsuyama (except Mt. Mikiji and Dogo Park), **4** Shikoku-chuo, **5** Niihama, **6** Saijo, **7** Imabari, **8** Kumakogen, **9** Iyo, **10** Ozu, **11** Yawatahama, **12** Ikata, **13** Kihoku, **14** Matsuno, **15** Uwajima, **16** Ainan.

in the present study. The following 19 species belonging to nine genera were newly recorded from Shikoku: *Stegana kanmiyai*, *S. nigrithorax*, *Phortica kappa*, *P. takadai*, *Leucophenga lacteusa*, *L. quadripunctata*, *L. quinquemaculipennis*, *Paraleucophenga argentosa*, *Dichaetophora sakagamii*, *Mycodrosophila basalis*, *My. erecta*, *Phorticella htunmaungi*, *Chymomyza obscuroides*, *Hirtodrosophila fascipennis*, *H. ikedai*, *H. macromaculata*, *H. nokogiri*, *H. pseudonokogiri* and *Lordiphosa collinella*. The species of the genera *Paraleucophenga*, *Phorticella* and *Chymomyza* were recorded in Shikoku for the first time. The two undescribed species, *Phortica* sp. aff. *glabra* and *Scaptodrosophila* sp., recorded by Katoh and Watada (2011) were also collected. Combining these results with the previous studies, 101 species belonging to 20 genera in two subfamilies of the Drosophilidae were recorded in Ehime prefecture (Table 1). The localities with the information of collection methods (**T**, collected by banana traps; **S**, collected by net sweeping) are

shown in the following list.

A list of drosophilid flies with collection

localities and methods in Ehime

Stegana kanmiyai Okada et Sidorenko, 1992, Jpn. J. Ent., 60: 419.

Specimens examined. Mt. Mikiji, Uwajima, **S**.

Stegana nigrifrons Meijere, 1911, Tijds. Ent., 54: 418.

Specimens examined. Mt. Mikiji, **S**.

Stegana nigrithorax Strobl, 1898, Mitth. Naturw. Ver. Steiermark (1897), 34: 192.

Specimens examined. Mt. Mikiji, **S**.

Amiota furcata Okada, 1971, Kontyu, Tokyo, 39: 85.

Specimens examined. Mt. Mikiji, Matsuyama, **S**.

Phortica magna (Okada, 1960), Mushi, 34: 99.

Specimens examined. Mt. Miyukiji, Dogo Park, Matsuyama, Uwajima, **TS**.

Phortica kappa (Maca, 1977), Acta Ent. Bohem., 74: 126.

Specimens examined. Mt. Mikiji, **TS**.

Phortica okadai (Maca, 1977), Acta Ent. Bohem., 74: 122.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **TS**.

Phortica takadai (Okada, 1977), Bull. Biogeogr. Soc. Jap., 32: 18.

Specimens examined. Uwajima, **S**.

Leucophenga acutipollinosa Okada, 1987, Kontyu, 55: 676.

Specimens examined. Uwajima, **S**.

Leucophenga angusta Okada, 1956, Syst. Study Drosophilidae Japan: 28.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **S**.

Leucophenga bellula (Bergroth, 1894), Ent. Z. Stettin, 55: 75.

Specimens examined. Matsuyama, **S**.

Leucophenga concilia Okada, 1956, Syst. Study Drosophilidae Japan: 30.

Specimens examined. Mt. Mikiji, Dogo Park, **S**.

Leucophenga interrupta Duda, 1924, Arch. Naturg., 90A(3): 187, 237.

Specimens examined. Mt. Mikiji, Dogo Park **TS**.

Leucophenga lacteusa Takada et Wakahama, 1967, Annot. Zool. Japon., 40: 56.

Specimens examined. Uwajima, **S**.

Leucophenga maculata (Dufour, 1839), Anns Sci. nat. Paris, 12: 14.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **S**.

Leucophenga orientalis Lin et Wheeler, 1972, Univ. Texas Publ., 7213: 249.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **S**.

Leucophenga ornata Wheeler, 1959, Univ. Texas Publ., 5914: 184.

Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S**.

Leucophenga quadripunctata (Meijere, 1908), Tijds. Ent., 51: 154.

Specimens examined. Mt. Mikiji, **TS**.

Leucophenga quinquemaculipennis Okada, 1956, Syst. Study Drosophilidae Japan: 33.

Specimens examined. Matsuyama, **S**.

Paraleucophenga argentosa (Okada, 1956), Syst. Study Drosophilidae Japan: 24.

Specimens examined. Mt. Mikiji, **T**.

Microdrosophila cristata Okada, 1960, Kontyu, Tokyo, 28: 214.

Specimens examined. Mt. Mikiji, **S**.

Microdrosophila maculata Okada, 1960, Kontyu, Tokyo, 28: 217.

Specimens examined. Mt. Mikiji, Dogo Park, **S**.

Microdrosophila pseudopleurolineata Okada, 1968, Kontyu, Tokyo, 36: 319.

Specimens examined. Mt. Mikiji, Dogo Park, **S**.

- Microdrosophila purpurata* Okada, 1956, Syst. Study Drosophilidae Japan: 40.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Microdrosophila urashimae* Okada, 1960, Kontyu, Tokyo, 28: 219.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Liodrosophila aerea* Okada, 1956, Syst. Study Drosophilidae Japan: 57.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **TS.**
- Liodrosophila castanea* Okada et Chung, 1960, Trans. Kyoto Ent. Soc. (Akitu), 9: 26.
Specimens examined. Mt. Mikiji, Dogo Park, **TS.**
- Dichaetophora acutissima* (Okada, 1956), Syst. Study Drosophilidae Japan: 139.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **S.**
- Dichaetophora delicata* (Nishiharu, 1981), Kontyu, Tokyo, 49: 21.
Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S.**
- Dichaetophora sakagami* (Toda, 1989), Jpn. J. Ent., 57(2): 379.
Specimens examined. Uwajima, **S.**
- Mycodrosophila basalis* Okada, 1956, Syst. Study Drosophilidae Japan: 50.
Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S.**
- Mycodrosophila erecta* Okada, 1968, Kontyu, Tokyo, 36: 324.
Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S.**
- Mycodrosophila gratiosa* (de Meijere, 1911), Tijds. Ent., 54: 404.
Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S.**
- Mycodrosophila palmata* Okada, 1956, Syst. Study Drosophilidae Japan: 54.
Specimens examined. Mt. Mikiji, Uwajima, **S.**
- Mycodrosophila planipalpis* Kang, Lee et Bahng, 1966, Korean J. Zool., 9: 27.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Mycodrosophila poecilogastra* (Loew, 1874), Z. Gesam. Naturw., 43: 419.
Specimens examined. Mt. Mikiji, Dogo Park, Uwajima, **S.**
- Mycodrosophila shikokuana* Okada, 1956, Syst. Study Drosophilidae Japan: 45.
Specimens examined. Matsuyama, Uwajima, **S.**
- Styloptera nishiharui* Okada, 1982, Kontyu, Tokyo, 50: 275.
Specimens examined. Uwajima, **T.**
- Paramycodrosophila nakamura* Okada, 1973, Kontyu, Tokyo, 41: 434.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **S.**
- Collessia kirishimana* (Okada, 1967), Mushi, 41: 4.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Scaptomyza pallida* (Zetterstedt, 1847), Dipt. Scand., Disposita et descripta, 6: 2571.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Scaptomyza graminum* (Fallen, 1823), Diptera Sveciae: Geomyzides, 2: 8.
Specimens examined. Mt. Mikiji, Dogo Park, **S.**
- Phorticella htunmaungi* Soe Wynn, Toda et Peng, 1990, Zool. Sci., 7: 299.
Specimens examined. Mt. Mikiji, Dogo Park, **TS.**
- Chymomyza obscuroides* Okada, 1976, Kontyu, Tokyo, 44: 497.
Specimens examined. Dogo Park, **S.**
- Zaprionus aungsani* Soe Wynn et Toda, 1988, Kontyu, Tokyo, 56: 844.
Specimens examined. Mt. Mikiji, Dogo Park, **TS.**
- Zaprionus grandis* (Kikkawa et Peng, 1938), Jap. J. Zool., 7: 543.
Specimens examined. Mt. Mikiji, Dogo Park, **TS.**
- Scaptodrosophila coracina* (Kikkawa et Peng, 1938), Jap. J. Zool., 7: 523.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Niihama, Toyo, Imabari, Kumakogen, Uwajima, **TS.**

- Scaptodrosophila subtilis* (Kikkawa et Peng, 1938), Jap. J. Zool., 7: 541.
Specimens examined. Mt. Mikiji, Dogo Park, Iyo, Ozu, Uwajima, **TS**.
- Hirtodrosophila fascipennis* (Okada, 1967), Mushi, 41: 8.
Specimens examined. Uwajima, **S**.
- Hirtodrosophila ikedai* (Toda, 1989), Jpn. J. Ent., 57(2): 377.
Specimens examined. Uwajima, **S**.
- Hirtodrosophila macromaculata* (Kang et Lee, 1961), Korean J. Zool., 4: 30.
Specimens examined. Uwajima, **S**.
- Hirtodrosophila mediohispidata* (Okada, 1967), Mushi, 41: 14.
Specimens examined. Mt. Mikiji, Dogo Park, **S**.
- Hirtodrosophila nokogiri* (Okada, 1956), Syst. Study Drosophilidae Japan: 84.
Specimens examined. Uwajima, **S**.
- Hirtodrosophila omogoensis* (Okada, 1956), Syst. Study Drosophilidae Japan: 82.
Specimens examined. Mt. Mikiji, Dogo Park, **T**.
- Hirtodrosophila pseudonokogiri* (Kang, Lee et Bahng, 1965), Korean J. Zool., 6: 53.
Specimens examined. Uwajima, **S**.
- Lordiphosa collinella* (Okada, 1968), Kontyu, Tokyo, 34: 339.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, **S**.
- Drosophila bifasciata* Pomini, 1940, Bol. Ist. Ent. Bologna, 12: 155.
Specimens examined. Kumakogen, Uwajima, **T**.
- Drosophila tsukubaensis* Takamori et Okada, 1983, Kontyu, Tokyo, 51: 265.
Specimens examined. Mt. Mikiji, Dogo Park, **TS**.
- Drosophila oshimai* Choo et Nakamura, 1973, Kontyu, Tokyo, 41: 305.
Specimens examined. Mt. Mikiji, Dogo Park, **TS**.
- Drosophila subpulchrella* Takamori & Watabe, 2006, Entomological Science, 9: 122.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Saijo, Kumakogen, **TS**.
- Drosophila suzukii* (Matsumura, 1931), 6000 Illus. Insects Japan Empire: 367.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Uwajima, **TS**.
- Drosophila lutescens* Okada, 1975, Kontyu, Tokyo, 43: 241.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Ozu, Iyo, Yawatahama, Ikata, Kihoku, Matsuno, Uwajima, Ainan, **TS**.
- Drosophila takahashii* Sturtevant, 1927, Philippine J. Sci., 32: 371.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Matsuno, Uwajima, **TS**.
- Drosophila melanogaster* Meigen, 1830, Syst. Besch. Bek. Europ. Zweifl. Ins., 6: 85.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Ozu, Iyo, Yawatahama, Ikata, Kihoku, Matsuno, Uwajima, Ainan, **TS**.
- Drosophila simulans* Sturtevant, 1919, Psyche, 26: 153.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Ozu, Iyo, Yawatahama, Ikata, Kihoku, Matsuno, Uwajima, Ainan, **TS**.
- Drosophila ficusphila* Kikkawa et Peng, 1938, Japan. J. Zool., 7: 531.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Saijo, Imabari, Kumakogen, Ozu, Iyo, Uwajima, **TS**.
- Drosophila auraria* Peng, 1937, Annot. Zool. Japon., 16: 20.
Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, **TS**.
- Drosophila biauraria* Bock et Wheeler, 1972, Univ. Texas Publ., 7213: 53.
Specimens examined. Dogo Park, **S**.

Drosophila rufa Kikkawa et Peng, 1938, Japan. J. Zool., 7: 529.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Imabari, Kumakogen, Ozu, Iyo, Ikata, Matsuno, Uwajima, **TS**.

Drosophila guangdongensis Toda et Peng, 1989, Zool. Sci., 6: 165.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, **TS**.

Drosophila virilis Sturtevant, 1916, Ann. Ent. Soc. Am., 9: 330.

Specimens examined. Matsuyama, Shikokuchuo, Imabari, Kumakogen, **TS**.

Drosophila tsigana Burla et Gloor, 1952, Z. indukt. Abstam. Vererb., 84: 164.

Specimens examined. Mt. Mikiji, Dogo Park, **T**.

Drosophila lacertosa Okada, 1956, Syst. Study Drosophilidae Japan: 158.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Kumakogen, Iyo, Uwajima, **TS**.

Drosophila neokadai Kaneko et Takada, 1966, Annot. Zool. Japon., 39: 56.

Specimens examined. Kumakogen, **T**.

Drosophila hydei Sturtevant, 1921, Carnegie Inst. Publ., 301: 101.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Ozu, Iyo, Yawatahama, Uwajima, **TS**.

Drosophila daruma Okada, 1956, Syst. Study Drosophilidae Japan: 155.

Specimens examined. Matsuyama, Saijo, Imabari, Iyo, Uwajima, Ainan, **TS**.

Drosophila angularis Okada, 1956, Syst. Study Drosophilidae Japan: 128.

Specimens examined. Mt. Mikiji, Dogo Park, **TS**.

Drosophila brachynephros Okada, 1956, Syst. Study Drosophilidae Japan: 126.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Saijo, Ozu, Iyo, **TS**.

Drosophila nigromaculata Kikkawa et Peng, 1938, Japan. J. Zool., 7: 537.

Specimens examined. Dogo Park, Uwajima, **TS**.

Drosophila unispina Okada, 1956, Syst. Study Drosophilidae Japan: 129.

Specimens examined. Kumakogen, Uwajima, **TS**.

Drosophila bizonata Kikkawa et Peng, 1938, Japan. J. Zool., 7: 532.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Kumakogen, Uwajima, **TS**.

Drosophila sternopleuralis Okada et Kurokawa, 1957, Kontyu, Tokyo, 25: 6.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Uwajima, **TS**.

Drosophila albomicans Duda, 1924, Arch. Naturg., 90A(3): 209, 245.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Ozu, Iyo, Yawatahama, Ikata, Kihoku, Matsuno, Uwajima, Ainan, **TS**.

Drosophila annulipes Duda, 1924, Arch. Naturg., 90A(3): 209, 221, 250.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Kumakogen, Uwajima, **TS**.

Drosophila curviceps Okada et Kurokawa, 1957, Kontyu, Tokyo, 25: 8.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Kumakogen, Uwajima, **TS**.

Drosophila immigrans Sturtevant, 1921, Carnegie Inst. Publ., 301: 83.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Niihama, Saijo, Imabari, Kumakogen, Ozu, Iyo, Yawatahama, Ikata, Kihoku, Matsuno, Uwajima, Ainan, **TS**.

Drosophila busckii Coquillett, 1901, Ent. News, 12: 16.

Specimens examined. Mt. Mikiji, Dogo Park, Matsuyama, Shikokuchuo, Saijo, Imabari, Kumakogen, Iyo, Kihoku, Uwajima, **TS**.

Table 1. A list of drosophilid species recorded from each survey in Ehime prefecture.

Genus	species	description						
			Okada (1988)	Watada et al. (2000)	Hoshina and Katoh (2011)	Katoh and Watada (2001)	Present study	
1 <i>Stegana</i>	<i>kanmiyai</i>	Okada et Sidorenko, 1992						○
2	<i>nigrifrons</i>	de Meijere, 1911					○	○
3	<i>nigrithorax</i>	Strobl, 1898						○
4 <i>Amiota</i>	<i>furcata</i>	Okada, 1971					○	○
5 <i>Phortica (Phortica)</i>	<i>magna</i>	(Okada, 1960)					○	○
6	<i>kappa</i>	(Maca, 1977)						○
7	<i>okadai</i>	(Maca, 1977)					○	○
8	<i>takadai</i>	(Okada, 1977)						○
9 <i>Phortica (Ashima)</i>	sp. aff. <i>glabra</i>	sp. nov.					○	○
10 <i>Leucophenga (Leucophenga)</i>	<i>acutipollinosa</i>	Okada, 1987				○		○
11	<i>albiceps</i>	(Meijere, 1914)						○
12	<i>angusta</i>	Okada, 1956					○	○
13	<i>bellula</i>	(Bergroth, 1894)					○	○
14	<i>concilia</i>	Okada, 1956				○		○
15	<i>interrupta</i>	Duda, 1924					○	○
16	<i>lacteus</i>	Takada et Wakahama, 1967						○
17	<i>maculata</i>	(Dufour, 1839)				○	○	○
18	<i>orientalis</i>	Lin et Wheeler, 1972				○		○
19	<i>ornata</i>	Wheeler, 1959				○		○
20	<i>quadripunctata</i>	Meijere, 1908						○
21 <i>Leucophenga (Neoleucophenga)</i>	<i>quinguemaculipennis</i>	Okada, 1956						○
22 <i>Paraleucophenga</i>	<i>argentosa</i>	(Okada, 1956)						○
23 <i>Microdrosophila (Microdrosophila)</i>	<i>cristata</i>	Okada, 1960						○
24	<i>maculata</i>	Okada, 1960					○	○
25	<i>pseudopleurolineata</i>	Okada, 1968					○	○
26	<i>purpurata</i>	Okada, 1956						○
27 <i>Microdrosophila (Oxystyloptera)</i>	<i>urashimae</i>	Okada, 1960					○	○
28 <i>Liodrosophila</i>	<i>aerea</i>	Okada, 1956				○		○
29	<i>castanea</i>	Okada et Chung, 1960					○	○
30 <i>Dichaetophora</i>	<i>acutissima</i>	(Okada, 1956)				○		○
31	<i>delicata</i>	(Nishiharu, 1981)					○	○
32	<i>sakagami</i>	(Toda, 1989)						○
33	<i>tenuicauda</i>	(Okada, 1956)				○		
34 <i>Mycodrosophila</i>	<i>basalis</i>	Okada, 1956						○
35	<i>erecta</i>	Okada, 1968						○
36	<i>gratiosa</i>	(de Meijere, 1911)				○		○
37	<i>palmata</i>	Okada, 1956				○		○
38	<i>planipalpis</i>	Kang, Lee et Bahng, 1966					○	○
39	<i>poecilogastra</i>	(Loew, 1874)				○		○
40	<i>shikokuana</i>	Okada, 1956				○		○
41 <i>Styloptera</i>	<i>nishihari</i>	Okada, 1982					○	
42 <i>Paramycodrosophila</i>	<i>nakamurai</i>	Okada, 1973						○
43 <i>Collessia</i>	<i>kinshimana</i>	(Okada, 1967)					○	○
44 <i>Scaptomyza (Parascaptomyza)</i>	<i>elmoi</i>	Takada, 1970				○		
45	<i>pallida</i>	(Zetterstedt, 1847)				○		○
46 <i>Scaptomyza (Scaptomyza)</i>	<i>concimillis</i>	Hackman, 1955				○		
47	<i>graminum</i>	(Fallen, 1823)				○		○
48 <i>Phorticella</i>	<i>htunmaungi</i>	Soe Wynn, Toda et Peng, 1990						○
49 <i>Chymomyza</i>	<i>obscuroides</i>	Okada, 1976						○
50 <i>Zapionus</i>	<i>aungsani</i>	Soe Wynn et Toda, 1988					○	○
51	<i>grandis</i>	(Kikkawa et Peng, 1938)				○		○

愛媛県で採集されたショウジョウバエの目録

Table 1. Continued.

Genus	species	description					
			Okada (1968)	Watada et al. (2000)	Hoshina and Katoh (2011)	Present study	Watada (2001)
52 <i>Scaptodrosophila</i>	<i>coracina</i>	(Kikkawa et Peng, 1938)	○	○	○	○	○
	<i>subtilis</i>	(Kikkawa et Peng, 1938)	○	○	○	○	○
	<i>throckmortoni</i>	(Okada, 1973)	○				
	sp.	sp. nov.				○	○
	56 <i>Hirtodrosophila</i>	<i>alboralis</i>	(Momma et Takada, 1954)	○			
57	<i>fascipennis</i>	(Okada, 1967)					○
58	<i>histrioides</i>	(Okada et Kurokawa, 1957)	○				
59	<i>ikedai</i>	(Toda, 1989)					○
60	<i>macromaculata</i>	(Kang et Lee, 1961)					○
61	<i>mediohispidata</i>	(Okada, 1967)				○	○
62	<i>nokogirii</i>	(Okada, 1956)					○
63	<i>omogoensis</i>	(Okada, 1956)	○				○
64	<i>pseudonokogirii</i>	(Kang, Lee et Bahng, 1965)					○
65	<i>quadrivittata</i>	(Okada, 1956)	○				
66 <i>Lordiphosa</i>	<i>collinella</i>	Okada, 1968					○
67 <i>Drosophila (Sophophora)</i>	<i>bifasciata</i>	Pomini, 1940	○		○		
68	<i>tukubaensis</i>	Takamori et Okada, 1983					○ ○
69	<i>oshimai</i>	Choo et Nakamura, 1973					○ ○
70	<i>subpulchrella</i>	Takamori & Watabe, 2006.	○	○	○	○	○ ○
71	<i>suzukii</i>	(Matsumura, 1934)	○	○	○	○	○ ○
72	<i>lutescens</i>	Okada, 1975	○	○	○	○	○ ○
73	<i>takahashii</i>	Sturtevant, 1927				○	○ ○
74	<i>melanogaster</i>	Meigen, 1830	○	○	○	○	○ ○
75	<i>simulans</i>	Sturtevant, 1919	○	○	○	○	○ ○
76	<i>ficuspheila</i>	Kikkawa et Peng, 1938	○	○	○	○	○ ○
77	<i>auraria</i>	Peng, 1937	○	○	○	○	○ ○
78	<i>biauraria</i>	Bock et Wheeler, 1972	○				○
79	<i>kikkawai</i>	Burla, 1954	○				
80	<i>rufa</i>	Kikkawa et Peng, 1938	○	○	○	○	○ ○
81	<i>triauraria</i>	Bock et Wheeler, 1972	○				
82 <i>Drosophila (Drosophila)</i>	<i>guangdongensis</i>	Toda et Peng, 1989					○ ○
83	<i>virilis</i>	Sturtevant, 1916	○	○			
84	<i>tsigana</i>	Burla et Gloor, 1952	○				○
85	<i>lacertosa</i>	Okada, 1956	○	○	○		○
86	<i>neokadai</i>	Kaneko et Takada, 1966				○	
87	<i>hydei</i>	Sturtevant, 1921	○	○	○	○	○ ○
88	<i>daruma</i>	Okada, 1956			○		
89	<i>angularis</i>	Okada, 1956	○				○
90	<i>brachynephros</i>	Okada, 1956	○	○			○ ○
91	<i>nigromaculata</i>	Kikkawa et Peng, 1938	○	○			○
92	<i>unispina</i>	Okada, 1956	○		○		
93	<i>testacea</i>	von Roser, 1840	○				
94	<i>bizonata</i>	Kikkawa et Peng, 1938	○	○	○	○	○ ○
95	<i>histrio</i>	Meigen, 1830	○				
96	<i>sternopleuralis</i>	Okada et Kurokawa, 1957	○		○	○	○ ○
97	<i>albomicans</i>	Duda, 1924			○	○	○ ○
98	<i>annulipes</i>	Duda, 1924	○			○	○ ○
99	<i>curviceps</i>	Okada et Kurokawa, 1957	○		○	○	○ ○
100	<i>immigrans</i>	Sturtevant, 1921	○	○	○	○	○ ○
101 <i>Drosophila (Dorsilopha)</i>	<i>busckii</i>	Conquillet, 1901	○	○	○	○	○ ○

Acknowledgements

We would like to express our sincere thanks to Dr. Masanori J. Toda (Hokkaido University) for the identification of drosophilid flies. We also thank Dr. Yasunori Murakami and Dr. Makiko Fukui for their insightful comments on the manuscript.

References

- Beppu, K. (2000) Faunal and ecological surveys on drosophilid flies in the Imperial Palace, Tokyo. *Mem. Natn. Sci. Mus.*, **36**, 409-435.
- Beppu, K. (2005) Drosophilid Faunas in the Akasaka Imperial Gardens and the Tokiwamatsu Imperial Villa, Tokyo. *Mem. Natn. Sci. Mus.*, **39**, 347-357.
- Beppu, K. (2006) Seasonal change of drosophilid assemblage and adult age structure of the common drosophilid species in Imperial Palace ground, Tokyo. *Mem. Natn. Sci. Mus.*, **43**, 295-334. (In Japanese with English summary)
- Hirai, Y., Goto, S. G., Yoshida, T. and Kimura, M. T. (2000) Faunal and ecological surveys on drosophilid flies in Iriomote-jima, a subtropical island of Japan. *Ent. Sci.*, **3**, 273-284.
- Hoshina, H. and Watada, M. (2001) Ecological notes on distribution of wild fruit flies (Diptera: Drosophilidae) in Ehime prefecture, Shikoku. *Bull. Inst. Environ. Sci. Tech. Yokohama Natn Univ.*, **27**, 91-98.
- Katoh, T. K. and Watada, M. (2012) Faunal and seasonal surveys on drosophilid flies by net sweeping in Ehime Prefecture, Shikoku, Japan. *Low Temp. Sci. B. Biol. Sci.*, **69**, 121-127.
- Kikkawa, H. and Peng, F. T. (1938) *Drosophila* species of Japan and adjacent localities. *Jap. J. Zool.*, **7**, 507-552.
- Kondo, M., and M. T. Kimura (2008) Diversity of drosophilid flies on Kume-juma, a subtropical island: comparison with diversity on Iriomote-juma. *Ent. Sci.*, **11**, 7-15.
- Mitsui, H. (1993) Flies at various environments in Ohta-ku (Tokyo) and in Sayama Hills (Saitama prefecture) I. *Bull. Inst. Nature Educ., Shiga Heights, Sinshu Univ.*, **30**, 11-21.
- Moriwaki, M. (1979) *Genetic Study of Drosophila*. Baihukan, Tokyo.
- Okada, T. (1956) *Systematic Study of Drosophilidae and Allied Families of Japan*. 183pp., Gihodo, Tokyo.
- Okada T (1965) Drosophilidae of the Okinawa Islands. *Kontyu.*, **33**, 327-350.
- Okada, T. (1988) Taxonomic outline of the family Drosophilidae of Japan. In: Suzuki K. (ed) *Selected Papers by Dr. Toyohi Okada (1936-1988)*, 1-87. Association of Memorial issue of Dr. Toyohi Okada. Toyama University, Japan.
- Takada, H. (1971) *Drosophila* in Hokkaido, its taxonomy and ecology. *J. Fac. gen. Educ., Sapporo Univ.*, **2**, 15-30.
- Toda, M. J. (1977) Two new "retainer" bait traps. *Drosophila Inform. Serv.*, **52**, 180.
- Toda, M. J. (2012) DrosWLD-Species: taxonomic information database for world species of Drosophilidae. Available at: <http://bioinfo.lowtem.hokudai.ac.jp/db/modules/stdb/index.php>
- Wakahama, K. (1964) Some ecological study in *Drosophila*. *Bull. Shimane Univ.*, **13**, 50-122.
- Watada, M., K. Morinaga, and O. Ochi (2000) Predominance of two colonizing species of *Drosophila* in Ehime prefecture, Japan. *Drosophila Inform. Serv.*, **83**, 93-100

Watada, M., Fuyama, Y., Tanabe, S., Watabe, H.,
Yoshioka, S. and Toda, M. J. (2011) Temporal
changes of the drosophilid faunain the Ogasawara
Islands, with a report on a new colonizing species.
Low Temp. Sci. B. Biol. Sci., **69**, 113-119.