Table 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| The information of the taxa and populations analyzed in this study. | | | |  |  |  |  |
| Population no. | Sample size | ITS genotype (n) | Cp haplotype (n) | Latitude, Longitude | Altitude (m) | Locality | Reference |
| ***P. hakusanensis*** | |  |  |  |  |  |  |
| 1 | 3 | H (3) | H1 (1), H11 (2) | Unknown | Unknown | Mt. Asahi, Asahi-cho, Nishimurayama-gun, Yamagata pref., Japan |  |
| 2 | 9 | H (9) | H1 (4), H2 (5) | 39°04'N, 140°02'E | 1,556 | Mt. Chokai, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 3 | 5 | H (5) | H1 (3), H2 (1) | 39°04'N, 140°02'E | 1,517 | Mt. Chokai, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 4 | 3 | H (3) | H1 (3) | 39°04'N, 140°02'E | 1,282 | Mt. Chokai, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 5 | 1 | H (1) | H11 (1) | 38°32'N, 139°59'E | 1,388 | Mt. Gassan, Tsuruoka, Yamagata pref., Japan |  |
| 6 | 4 | G (4) | H10 (4) | 36°08'N, 136°46'E | 2,072 | Mt. Hakusan, Shiramine, Hakusan city, Ishikawa pref., Japan |  |
| ***P. asiatica var. densiuscula*** | | | | | | | |
| 7 | 4 | A (4) | H3 (4) | 39°04'N, 140°02'E | 1,539 | Mt. Chokai, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 8 | 3 | A (3) | H4 (2), H8 (1) | 39°04'N, 140°02'E | 1,282 | Mt. Chokai, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 9 | 3 | A (3) | H3 (2), H4 (1) | 39°06'N, 139°52'E | 4 | Fukuura Misaki, Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
| 10 | 2 | A (1) | H8 (1) | 34°40'N, 135°50'E | 112 | Nara park, Nara pref., Japan | Ishikawa *et al.* 2006a |
| 11 | 1 | ND | H8 (1) | 34°39'N, 135°50'E | 107 | Nara University of Education, Nara pref., Japan |  |
| 12 | 1 | A (1) | H1 (1) | Unknown | Unknown | Shirakawa, Gifu pref., Japan | Ishikawa *et al.* 2006a |
| 13 | 2 | A (1) | H8 (1) | 35°00'N, 135°51'E | 123 | Otu city, Shiga pref., Japan | Ishikawa *et al.* 2006a |
| 14 | 1 | A (1) | ND | 35°00'N, 135°47'E | 64 | Sakyo-ku, Kyoto pref., Japan | Ishikawa *et al.* 2006a |
| 15 | 1 | A (1) | H4 (1) | 34°27'N, 136°43'E | 18 | Ise city, Mie pref., Japan | Ishikawa *et al.* 2006a |
| 16 | 1 | A (1) | H8 (1) | 34°14'N, 133°00'E | 6 | Ohmi-shima Island, Ehime pref., Japan | Ishikawa *et al.* 2006a |
| 17 | 1 | A (1) | H6 (1) | 33°53'N, 133°11'E | 44 | Saijyo city, Ehime pref., Japan | Ishikawa *et al.* 2006a |
| 18 | 1 | A (1) | ND | 33°35'N, 130°24'E | 3 | Fukuoka city, Fukuoka pref., Japan | Ishikawa *et al.* 2006a |
| 19 | 2 | A (2) | H8 (1) | 33°31'N, 130°32'E | 50 | Dazaifu city, Fukuoka pref., Japan | Ishikawa *et al.* 2006a |
| 20 | 1 | A (1) | H9 (1) | Unknown | Unknown | Mt. Yuwan, Amamiohshima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
| 21 | 1 | D (1) | H8 (1) | 30°44'N, 130°59'E | 22 | Tanega-shima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
| 22 | 1 | A (1) | ND | 38°18'N, 141°33'E | 62 | Kinkazan Island, Miyagi pref., Japan | Ishikawa *et al.* 2006a |
| 23 | 2 | A (1) | H8 (1) | 34°17'N, 132°18'E | 22 | Miyajima Island, Hiroshima pref., Japan | Ishikawa *et al.* 2006a |
| 24 | 1 | A (1) | H4 (1) | 43°03'N, 141°18'E | 34 | Sapporo city, Hokkaido pref., Japan | Ishikawa *et al.* 2006a |
| 25 | 1 | A (1) | H4 (1) | Unknown | Unknown | Akita pref., Japan | Ishikawa *et al.* 2006a |
| 26 | 1 | A (1) | H4 (1) | 38°20'N, 141°30'E | 364 | Mt. Hikariyama, Miyagi pref., Japan | Ishikawa *et al.* 2006a |
| 27 | 1 | A (1) | H1 (1) | 35°42'N, 139°45'E | 23 | Hongo campus of the University of Tokyo, Tokyo, Japan | Ishikawa *et al.* 2006a |
| 28 | 1 | B (1) | H1 (1) | 35°18'N, 139°32'E | 8 | Kamakura, Kanagawa pref., Japan | Ishikawa *et al.* 2006a |
| 29 | 1 | C (1) | ND | 36°35'N, 137°26'E | 474 | Toyama pref., Japan | Ishikawa *et al.* 2006a |
| 30 | 1 | E (1) | H5 (1) | Unknown | Unknown | Mt. Ontake, Nagano pref., Japan | Ishikawa *et al.* 2006a |
| 31 | 1 | A (1) | ND | Unknown | 2,200 | Nagano pref., Japan | Ishikawa *et al.* 2006a |
| 32 | 1 | A (1) | H1 (1) | 36°35'N, 137°27'E | 977 | Toyama pref., Japan | Ishikawa *et al.* 2006a |
| 33 | 1 | A (1) | H7 (1) | 34°57'N, 137°09'E | 48 | Okazaki, Aichi pref., Japan | Ishikawa *et al.* 2006a |
| 34 | 1 | A (1) | ND | 34°50'N, 137°32'E | 140 | Mt. Maruyama, Aichi pref., Japan | Ishikawa *et al.* 2006a |
| 35 | 1 | A (1) | ND | 34°29'N, 136°51'E | 66 | Sakatejima Island, Mie pref., Japan | Ishikawa *et al.* 2006a |
| 36 | 1 | A (1) | H8 (1) | 34°32'N, 134°59'E | 2 | Awajishima Island, Hyogo pref., Japan | Ishikawa *et al.* 2006a |
| 37 | 1 | A (1) | ND | Unknown | 800 | Mt. Daisen, Tottori pref., Japan | Ishikawa *et al.* 2006a |
| 38 | 1 | A (1) | H8 (1) | 35°18'N, 133°40'E | 516 | Hiruzen, Okayama pref., Japan | Ishikawa *et al.* 2006a |
| 39 | 1 | A (1) | ND | Unknown | 1,270 | Mt. Karasugasen, Tottori pref., Japan | Ishikawa *et al.* 2006a |
| 40 | 1 | A (1) | H8 (1) | 33°37'N, 130°25'E | 3 | Kyushu University, Fukuoka pref., Japan | Ishikawa *et al.* 2006a |
| 41 | 1 | D (1) | ND | 31°35'N, 130°36'E | 7 | Sakurajima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
| 42 | 1 | A (1) | H8 (1) | 31°33'N, 130°42'E | 33 | Sakurajima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
| 43 | 1 | A (1) | H1 (1) | Unknown | Unknown | Tawulun Fort, Keelung,Taiwan | Ishikawa *et al.* 2006a |
| 44 | 1 | A (1) | H1 (1) | Unknown | Unknown | Ilan, Taiwan | Ishikawa *et al.* 2006a |
| 45 | 1 | A (1) | ND | Unknown | 1,700 | Mt. Halla, Cheju Island, Korea | Ishikawa *et al.* 2006a |
|  |  |  |  |  |  |  |  |
| ***P. asiatica var. densiuscula f. yakusimensis*** | | |  |  |  |  |  |
| 46 | 2 | F (1) | H8 (1) | 30°20'N, 130°30'E | 1,911 | Mt. Miyanoura, Yakushima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
| 47 | 1 | F (1) | H8 (1) | 30°19'N, 130°30'E | 1,789 | Mt. Kuromi, Yakushima Island, Kagoshima pref., Japan | Ishikawa *et al.* 2006a |
|  |  |  |  |  |  |  |  |
| ***P. asiatica*** | |  |  |  |  |  |  |
| 48 | 1 | J (1) | H11 (1) | Unknown | Unknown | China, cult. | Rønsted et al. 2002a, Iwanycki Ahlstrand et al. 2019, Kew DNA bank ID=9585, K |
|  |  |  |  |  |  |  |  |
| ***P. major*** |  |  |  |  |  |  |  |
| 49 | 1 | I (1) | Not included | Unknown | Unknown | Sachsen-Anhalt, Germany | Rønsted et al. 2002a |
|  |  |  |  |  |  |  |  |
| ***P. major* var. *japonica*** | |  |  |  |  |  |  |
| 50 | 1 | J (1) | ND | 39°06'N, 139°52'E | 5 | Yusa-cho, Akumi-gun, Yamagata pref., Japan |  |
|  |  |  |  |  |  |  |  |
| ***P. camtschatica*** | |  |  |  |  |  |  |
| 51 | 1 | K (1) | H12 (1) | 38°43'N, 139°40'E | 1 | Tsuruoka city, Yamagata pref., Japan |  |
| 52 | 1 | L (1) | H13 (1) | Unknown | Unknown | (Rahn 684, C) | Iwanycki Ahlstrand et al. 2019b |
| ND: Not determined, n: Number of samples | | |  |  |  |  |  |
| a Nucleotide Sequence of the ITS region was determined in the indicated reference. | | | | | | | |
| b Nucleotide Sequence of the ITS and chloroplast regions were determined in the indicated reference. | | | | | | | |