

Notes on the Distribution of the *Vandenboschia radicans* Complex (Hymenophyllaceae) in Japan

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Abstract The distribution of eight species and four hybrids included in the *Vandenboschia radicans* complex within Japan is reviewed. Distribution maps for each taxon are provided based on herbarium specimens, which are listed in order of municipality code.

Key words: Distribution, Hymenophyllaceae, Japan, *Vandenboschia*.

Introduction

Vandenboschia subgen. *Vandenboschia* (Hymenophyllaceae) distributed in world temperate/subtropical regions encompasses a number of morphologically ill-defined species, and they are tentatively lumped under a species complex named “*Vandenboschia radicans* complex”. As for Japanese members of the complex, Ebihara *et al.* (2005a) clarified their biological entities by DNA/ploidy analyses, and Ebihara *et al.* (2009) reexamined their taxonomic properties. Since the number of samples analyzed in these studies is still limited, it is necessary to examine as many herbarium specimens as possible to cover the whole range of the Japanese archipelago and map their localities for grasping the distribution of each newly defined taxon.

Materials and Methods

A total of 3589 sheets of herbarium specimens tentatively identified as the *Vandenboschia radicans* complex were examined in the herbaria KAG, KYO, MBK, RYU, TAI, TI and Yamaguchi Museum (hereafter abbreviated as YMG, but unregistered in the Index Herbariorum). Identification was made with the knowledge on correlation between morphology and genomic formula obtained from our previous studies (Ebihara *et al.*, 2005a; 2009). In the present identification, two amphidiploids, *V. hokurikuensis* and *V. orientalis*,

were embedded in *V. ×stenosiphon* and *V. ×quelpaertensis*, respectively because it is difficult to discriminate amphidiploids from sterile hybrids sharing the same genome combinations (but different genome dosage). As shown in the discriminant analysis (Ebihara *et al.*, 2009), some of the redefined taxa morphologically overlap with each other. Therefore, descriptions and keys do not always provide sufficient information for their identification. Digital images of examined specimens (only those deposited in TNS), to compensate the difficulty, are accessible via online database (<http://www.vspecimens.net/>). All the TNS specimens collected in Japan, and specimens of other herbaria with localities not overlapping with those of TNS specimens are cited with their registration numbers and localities (municipalities). Their order generally follows municipality code instituted by the Ministry of Internal Affairs and Communications, Japan with exception of some islands.

Results and Discussion

Vandenboschia kalamocarpa (Hayata) Ebihara
[Figs. 1, 13]

Distributed mostly on the Pacific side, around 35.5° N latitude line south. Known localities of diploids are limited including Kii Peninsula, Yaku Isl. and the Bonin islands, while triploids show wider distribution. Frond length of diploids

usually under 10 cm, not more than 15 cm. All the examined individuals of Okinawa Island and Taiwan are triploids. Rachis wings tend to be broad and wavy, but this character is not always a reliable key for segregating this species from *V. ×stenosiphon*. Distributed in continental China (Jiangxi Prov.) as well as Taiwan.

Vandenboschia nipponica (Nakai) Ebihara

[Figs. 2, 14]

An element of broad-leaved deciduous forest on the Sea of Japan side, ranging south to the Kyushu mountain range. Diploids are recognizable by three-dimensionally arranged segments and broadly triangular involucre. The lowest pinnae are usually more or less shorter than upper ones. Triploids which usually have subdeltoid fronds and less three-dimensionally arranged segments are often difficult to segregate from *V. ×stenosiphon* by morphological characters. Ranging north to Shiribeshi Prov., Hokkaido Pref., and south to Aira-cho, Kagoshima Pref. There is some possibility of misidentification of triploids as *V. ×stenosiphon*. Endemic to Japan, and probably speciated from *V. kalamocarpa* adapting to heavy-snow environment.

Vandenboschia birmanica (Bedd.) Ching

[Figs. 3, 15]

A subtropical species, distributed only in warm places on the Pacific side of the Japanese Archipelago. The distribution largely overlaps with that of *V. kalamocarpa*. The northern and eastern distribution limit is Shirakawa, Nishiizu-cho, Shizuoka Pref. There are a number of localities from southern Kyushu to Okinawa Isl., but none known from Yaeyama Islands. Frond length usually more than 30 cm, diameter of rhizome approximately 1.5 mm — plants smaller than these sizes are probably the hybrid, *V. ×quelpaertensis*. There are at least two cytotypes, diploid and triploid, but morphological difference between them is unclear. Distributed in Taiwan, China, India, Nepal, Bhutan, Myanmar (type locality), Thailand, Laos and Vietnam.

Vandenboschia subclathrata K. Iwats.

[Figs. 4, 16]

A local endemic species in Yaeyama Islands (Iriomote Isl. and Ishigaki Isl.). Many localities are known in Iriomote Isl., while only one collection from the Ishigaki Isl.

Vandenboschia hokurikuensis Ebihara [Fig. 5]

A tetraploid species originated from hybridizations between *V. kalamocarpa* and *V. nipponica*. So far known only from Japan.

Vandenboschia orientalis (C. Chr.) Ching

[Fig. 6]

A tetraploid species originated from hybridizations between *V. birmanica* and *V. kalamocarpa*. The distribution roughly corresponds to the area where distributions of the two parental species overlap. In most cases, segregation from *V. ×quelpaertensis* by morphological characters is difficult, but Amami-oshima plants exceptionally show characteristic frond shape which is reminiscent of *V. subclathrata* with widely spaced segments. Endemic to Japan.

Vandenboschia miuraensis Ebihara [Fig. 7]

A tetraploid species originated from hybridizations between *V. birmanica* and *V. nipponica*. No overlapping distribution of the two parents is known so far.

Vandenboschia oshimensis (H. Christ) Ebihara

[Fig. 8]

A tetraploid species originated from hybridizations between *V. birmanica* and *V. liukiensis*. Distributed in Amami-oshima Isl. (type collection only) and Okinawa Island.

Vandenboschia ×stenosiphon (H. Christ)

Copel. [Fig. 9]

A sterile hybrid consisting of the genome of *V. kalamocarpa* and *V. nipponica*. Widely and frequently distributed throughout Japan except in the Ryukyu and Bonin Islands. Also distributed in Cheju-do Isl., South Korea.

Vandenboschia* × *quelpaertensis (Nakai)
Ebihara [Fig. 10]

A sterile hybrid consisting of the genome of *V. birmanica* and *V. kalamocarpa*. Distributed mostly in coastal areas from 35.5°N latitude line south to southern Ryukyus and to Bonin Islands. The two plants^{*1} with 2n = 108 chromosomes observed by Mitui (1968; 1973) are probably this hybrid. [*¹ Yakushima Isl., Kagoshima Pref. (= TNS-VS-321833) and Chichijima Isl., Bonin Islands, Tokyo Pref. (= TNS-VS-290706)] Also distributed in Cheju-do Isl., South Korea, but rare.

Vandenboschia birmanica (Bedd.) Ching ×
V. nipponica (Nakai) Ebihara [Fig. 11]

A sterile hybrid consisting of the genome of *V. birmanica* and *V. nipponica*. Known only from Chiba and Kanagawa prefectures. As already noted in Ebihara *et al.* (2005b), Miura Peninsula (Kanagawa Pref.) and Boso Peninsula (Chiba Pref.) are the areas richest in genome combination of hybrids.

Vandenboschia birmanica (Bedd.) Ching ×
V. kalamocarpa (Hayata) Ebihara × ***V. nipponica***
(Nakai) Ebihara [Fig. 12]

A sterile hybrid consisting of genomes derived from three parental species. Further localities may have been overlooked since species recogni-

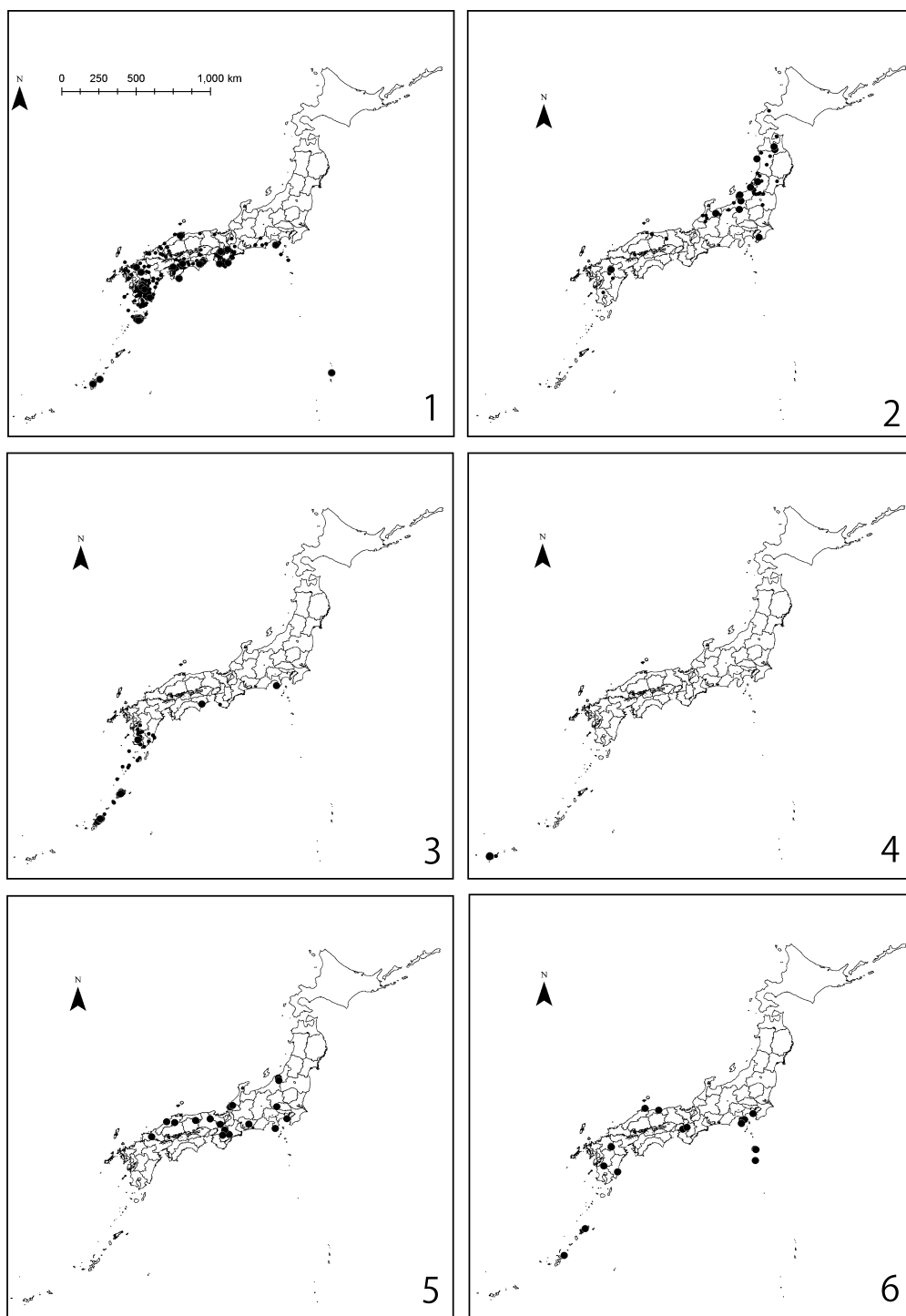
tion based solely on morphological characters is often unsuccessful.

Acknowledgement

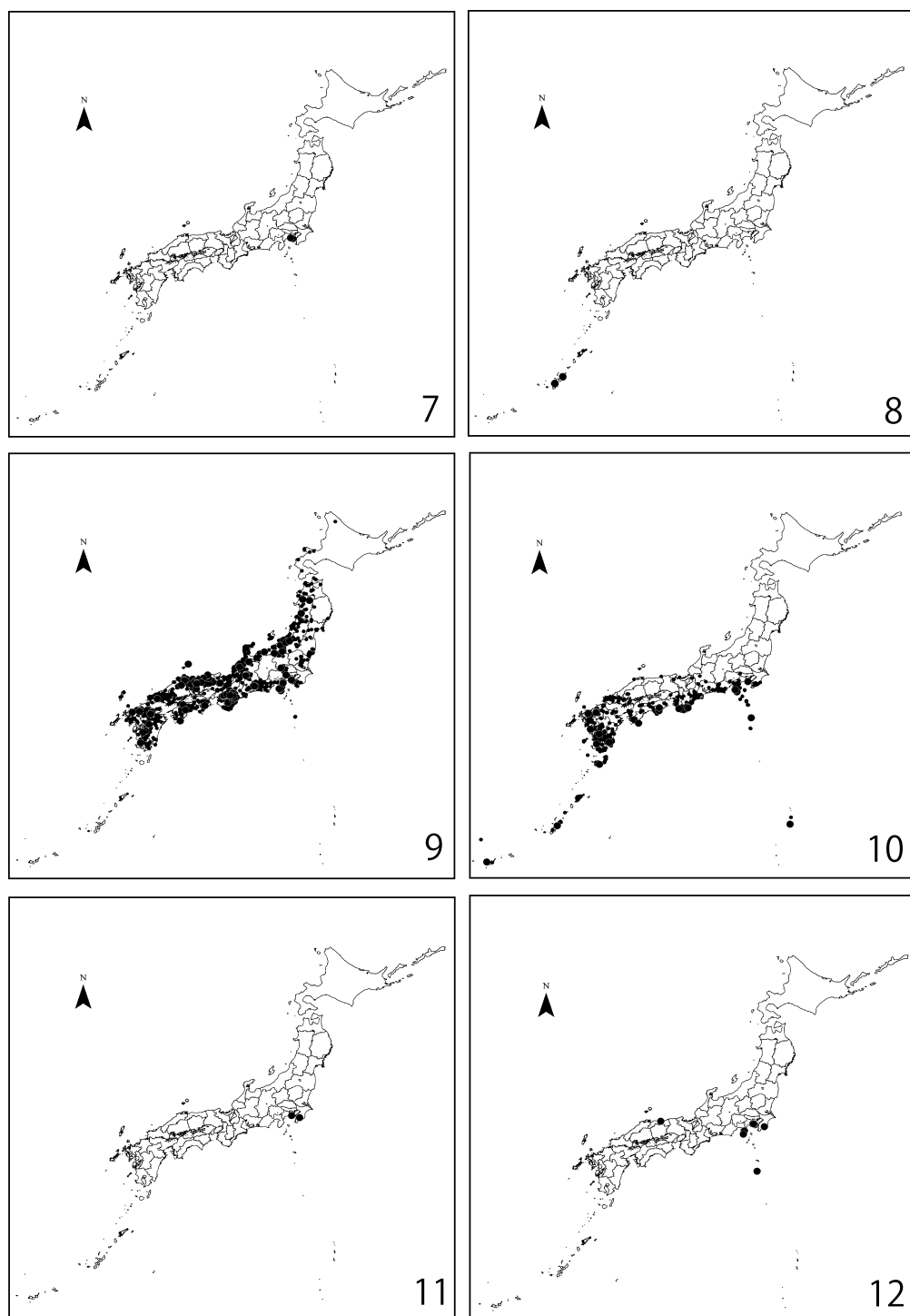
The author thanks the curators of KAG, KYO, MBK, RYU, TAI, TI and Yamaguchi Museum for their help in examining specimens.

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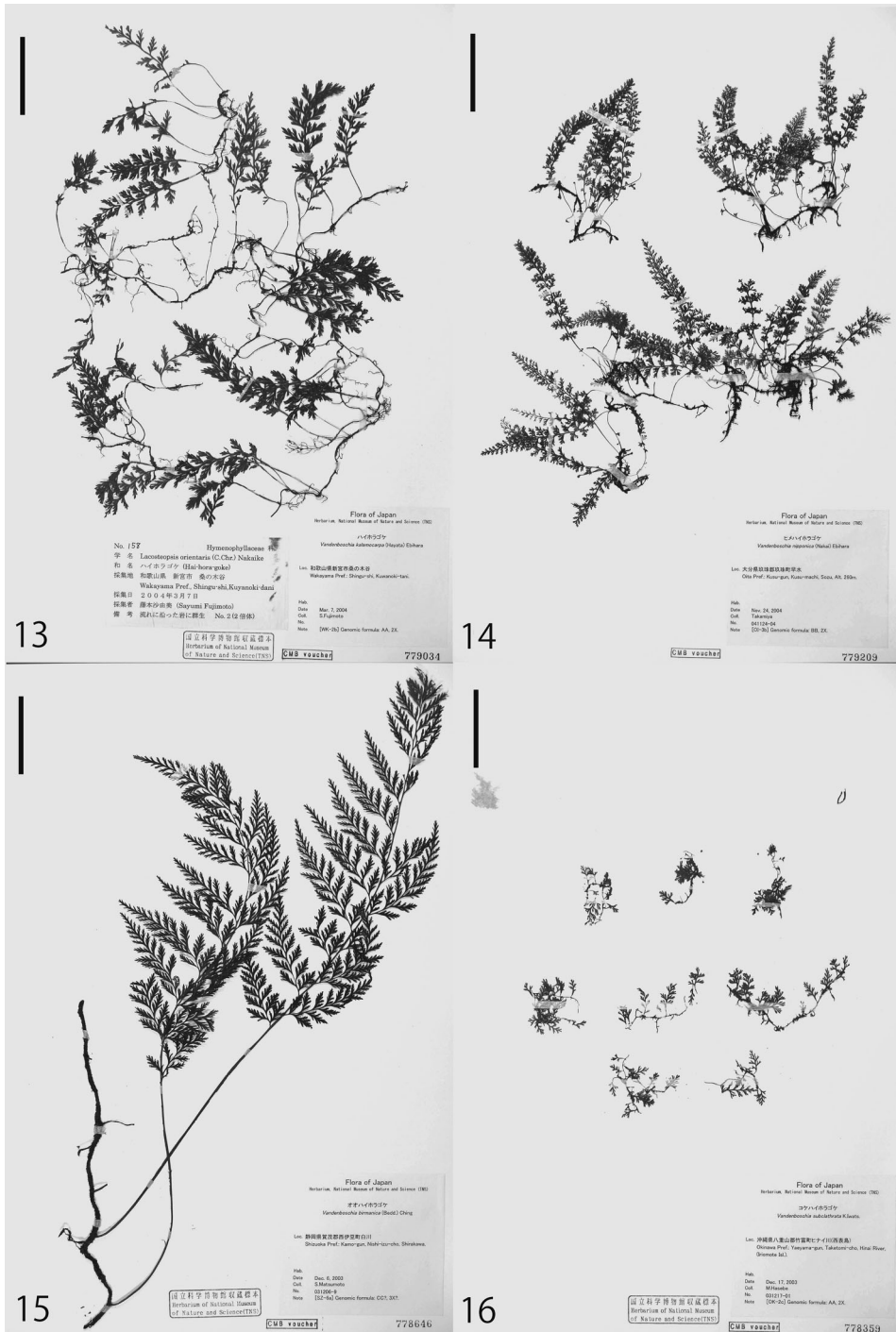
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Figs. 1–6. Distribution maps of the *Vandenboschia radicans* complex in Japan. Fig. 1. *V. kalamocarpa*. Fig. 2. *V. nipponica*. Fig. 3. *V. birmanica*. Fig. 4. *V. subclathrata*. Fig. 5. *V. orientalis*. Fig. 6. *V. hokurikuensis*. Large dot: localities of the specimens analyzed by molecular/ploidy analyses; small dot: localities of herbarium specimens.



Figs. 7–12. Distribution maps of the *Vandenboschia radicans* complex in Japan. Fig. 7. *V. miuraensis*. Fig. 8. *V. oshimensis*. Fig. 9. *V. ×stenosiphon*. Fig. 10. *V. ×quelpaertensis*. Fig. 11. *V. birmanica* × *V. nipponica*. Fig. 12. *V. birmanica* × *V. kalamocarpa* × *V. nipponica*. Large dot: localities of the specimens analyzed by molecular/ploidy analyses; small dot: localities of herbarium specimens.



Figs. 13–16. Authentic specimens of four diploid species. Fig. 13. *Vandenboschia kalamocarpa* (Wakayama Pref., TNS-VS-779034). Fig. 14. *V. nipponica* (Oita Pref., TNS-VS-779209). Fig. 15. *V. birmanica* (Shizuoka Pref., TNS-VS-778646). Fig. 16. *V. subclathrata* (Iriomote Isl., Okinawa Pref., TNS-VS-778359). Scale = 5 cm.

Appendix: Specimens examined

Vandenboschia kalamocarpa (Hayata) Ebihara (Figs. 1, 13)

Tokyo Pref. Koze Isl./Kozushima-mura: TNS-VS-802848; Mikura Isl./Mikurajima-mura: TNS-VS-802956, TNS-VS-802957, TNS-VS-803020; Chichijima Isl./Ogasawara-mura: TNS-VS-52395, TNS-VS-778664, TNS-VS-778665, TNS-VS-778666.

Shizuoka Pref. Fujieda-shi: TNS-VS-536194; Kamo-gun, Minamiizu-cho: KYO 00010399; Nishiizu-cho: TNS-VS-449833, TNS-VS-778642; Tagata-gun, Nakaizu-cho: TNS-VS-457356, TNS-VS-536196; Ogasa-gun, Daito-cho: TNS-VS-44338; Iwata-gun, Misakubo-cho: TNS-VS-1031905; Inasa-gun, Hosoe-cho: TNS-VS-449829.

Mie Pref. Owase-shi: TNS-VS-130364, TNS-VS-537847, TNS-VS-1031947, KYO 00010266, KYO 00010630, OSA 00111555; Hisai-shi: TNS-VS-537913; Iinan-gun, Iitaka-cho: OSA 00093696; Taki-gun, Miyagawa-mura: TNS-VS-537846; Watarai-gun, Ochiyama-mura: TNS-VS-537833; Kitamuro-gun, Miyama-cho: KYO 00010263; Minamimuro-gun, Kiho-cho: TNS-VS-779033, OSA s.n. (K. Seto 4471), OSA s.n. (K. Seto 4473).

Kyoto Pref. Kasa-gun, Oe-cho: TNS-VS-194842.

Shiga Pref. Kanzaki-gun, Notogawa-cho: TI 00000574, TI 00000575.

Osaka Pref. Izumi-shi: TNS-VS-778606, TNS-VS-778607.

Nara Pref. Uda-gun, Muro-mura: KYO 00010367; Yoshino-gun, Yoshino-cho: TNS-VS-583792; Nishiyoshino-mura: OSA 00051636; Kawakami-mura: TNS-VS-779037.

Wakayama Pref. Kainan-shi: OSA 00131639; Hashimoto-shi: TNS-VS-937967; Tanabe-shi: TNS-VS-937936; Shingu-shi: TNS-VS-779034, OSA 00131688; Naga-gun, Kokawa-cho: OSA 00131641; Ito-gun, Katsuragi-cho: TNS-VS-937969, TNS-VS-937970; Arita-gun, Shimizu-cho: TNS-VS-937955, OSA 00131650; Hidaka-gun, Ryujin-mura: TNS-VS-937963, OSA 00005004; Nishimuro-gun, Shirahama-cho: TNS-VS-779184, TNS-VS-802937, TNS-VS-802938, TNS-VS-802939, TNS-VS-802940, TNS-VS-802941, TNS-VS-802943, OSA 00131655; Nakahechi-cho: OSA 00131661; Oto-mura: OSA 00131669; Hikigawa-cho: TNS-VS-937945; Susami-cho: OSA 00131686; Kushimoto-cho: OSA 00131684; Higashimuro-gun, Nachikatsuura-cho: OSA 00047784, OSA 00131690; Kozagawa-cho: TNS-VS-1032029, OSA 00027053; Kumanogawa-cho: TNS-VS-937940, OSA 00131699, OSA 00131700; Hongu-cho: TNS-VS-937938, TNS-VS-937960, OSA 00027873.

Tottori Pref. Iwami-gun, Kokufu-cho: TNS-VS-452644.

Shimane Pref. Hamada-shi: YMG 0049629; Hirata-shi:

TI 00000549; Yatsuka-gun, Yakumo-mura: TNS-VS-778656, TNS-VS-9516603; Nita-gun, Yokota-cho: OSA 00004998; Mino-gun, Mito-cho: YMG 0035709; Kanoashi-gun, Nichihara-cho: YMG 0049215.

Hiroshima Pref. Saeki-gun, Itsukaichi-cho: TNS-VS-9516546; Yamagata-gun, Kake-cho: TNS-VS-793393.

Yamaguchi Pref. Yamaguchi-shi: TNS-VS-50514; Iwakuni-shi: YMG 0079581; Mine-shi: YMG 0040949; Tsuno-gun, Kano-cho: YMG 0064779; Toyora-gun, Toyota-cho: TNS-VS-275298; Abu-gun, Ato-cho: YMG 0023789.

Tokushima Pref. Myodo-gun, Sanagochi-son: KYO 00010477; Naka-gun, Aioi-cho: TNS-VS-779161; Kito-son: TNS-VS-9516621; Kaifu-gun, Kainan-cho: TNS-VS-779165, TNS-VS-779168, TNS-VS-779170, TNS-VS-779171, TNS-VS-779172, TNS-VS-9516543, TNS-VS-9516614.

Kagawa Pref. Okawa-gun, Shirotori-cho: TNS-VS-9516643; Nagao-cho: TNS-VS-9516644; Shozu-gun, Uchinomi-cho: TNS-VS-9516629.

Ehime Pref. Matsuyama-shi: TNS-VS-525384; Niihama-shi: KYO 00010486; Ozu-shi: TNS-VS-779167, TNS-VS-793472; Shuso-gun, Tanbara-cho: TNS-VS-525387; Kamiukena-gun, Mikawa-mura: KYO 00010478; Kitauwa-gun, Mima-cho: TNS-VS-793420; Matsuno-cho: TNS-VS-525392, TI 00000506; Hiyoshi-mura: TNS-VS-525386, TNS-VS-525391; Minamiuwa-gun, Ipponmatsu-cho: KYO 00010481, KYO 00010485.

Kochi Pref. Nankoku-shi: MBK 0019994, OSA 00216532; Susaki-shi: KYO 00010464; Tosashimizu-shi: TNS-VS-779175, KYO 00010462; Aki-gun, Toyochi: TNS-VS-553418; Kami-gun, Monobe-son: TNS-VS-553486; Tosa-gun, Tosa-cho: MBK 0052740; Agawa-gun, Ikegawa-cho: TNS-VS-779177, KYO 00010463; Niyodogawa-cho: TNS-VS-63416, TNS-VS-252872; Takaoka-gun, Higashitsuno-mura: TNS-VS-553427; Sakawa-cho: TI 00000546; Ochi-cho: TNS-VS-553487, TNS-VS-782817, TNS-VS-1031953, TNS-VS-1031955.

Fukuoka Pref. Fukuoka-shi: TNS-VS590377, TNS-VS-590378; Chikushino-shi: TNS-VS-590381; Chikushi-gun, Nakagawa-machi: TNS-VS-778629, TNS 9519705, TNS 9519715; Kurate-gun, Miyata-machi: KYO 00010137; Tagawa-gun, Soeda-machi: KYO 00010215; Chikujo-gun, Taihei-mura: TNS-VS-589856.

Saga Pref. Imari-shi: TNS-VS-536402; Takeo-shi: TNS-VS-536399; Saga-gun, Fuji-cho: TNS-VS-536409; Kanzaki-gun, Sefuri-mura: TNS-VS-536412; Fujitsu-gun, Tara-cho: TNS-VS-536406.

Nagasaki Pref. Nagasaki-shi: TNS-VS-519901, OSA 00046635; Kitatakaki-gun, Iimori-cho: TNS-VS-480530; Iki Isl./Iki-gun, Gonora-cho: TNS-VS-793402.

Kumamoto Pref. Hitoyoshi-shi: TNS-VS-35816, KYO 00010140, KYO 00010168; Minamata-shi: YMG

0050013, KYO 00010110, KYO 00010112; Kamotogun, Kahoku-machi: TNS-VS-778338; Aso-gun, Oguni-machi: OSA s.n. (Z. Tashiro 1921-8-25); Kamimashiki-gun, Mifune-machi: TNS-VS-455305; Yabe-machi: TNS-VS-455293; Yatsushiro-gun, Izumi-mura: TNS-VS-802883; Kuma-gun, Nishiki-machi: KYO 00010180; Mizukami-mura: KYO 00010138; Sagara-mura: KYO 00010166; Itsuki-mura: TNS-VS-762695, TNS-VS-778520; Yamae-mura: TNS-VS-762671, TNS-VS-778335, TNS-VS-802850.

Oita Pref. Saeki-shi: TNS-VS-456746; Kusu-gun, Koko-noe-machi: KYO 00010181; Shimoge-gun, Honyabakei-machi: TNS-VS-456749.

Miyazaki Pref. Miyazaki-shi: TNS-VS-459237; Miyakonojo-shi: TNS-VS-521720; Nichinan-shi: TNS-VS-459234, TNS-VS-521776, TNS-VS-784673, TNS-VS-9518558, TNS-VS-9518559; Saito-shi: TNS-VS-521729; Ebino-shi: TNS-VS-77863, KYO 00010220; Kitamorokata-gun, Yamanokuchi-cho: TNS-VS-521726, TNS-VS-521732; Takazaki-cho: TNS-VS-521731; Nishimorokata-gun, Takaharu-cho: TNS-VS-521784; Suki-son: TNS-VS-521734; Higashimorokata-gun, Takaoka-cho: TI 00000543; Koyu-gun, Tsuno-cho: TNS-VS-459235; Higashiusuki-gun, Saigo-son: TNS-VS-521738; Kitakata-cho: TNS-VS-521739; Shiiba-son: TNS-VS-521719; Nishiusuki-gun, Hinokage-cho: KYO 00010126; Gokase-cho: TI 00042265.

Kagoshima Pref. Kanoya-shi: TNS-VS-453785, TNS-VS-453786; Izumi-shi: KYO 00010116, KYO 00010117; Okuchi-shi: TNS-VS-802926, KYO 00010188; Kasedashi: TNS-VS-453599; Ibusuki-gun, Kaimon-cho: KYO 00010122; Hioki-gun, Higashiichiki-cho: TNS-VS-453588; Satsuma-gun, Miyanojo-cho: TNS-VS-453793; Shimokoshi Isl./Shimokoshi-son: TNS-VS-802890, YMG 0050084; Isa-gun, Hishikari-cho: TNS-VS-453585; Aira-gun, Kajiki-cho: KYO 00010199; Kamo-cho: TNS-VS-453790, TNS-VS-1032006; Mizobe-cho: KYO 00010192; Yokogawa-cho: TNS-VS-453781, TNS-VS-453783; Kurino-cho: TNS-VS-453612, TNS-VS-453614, TNS-VS-1032009, KYO 00010196; Makizono-cho: TNS-VS-1031959, KYO 00010211; Kirishima-cho: TNS-VS-453613; So-gun, Takarabe-cho: TNS-VS-453624, TNS-VS-453791, KYO 00010218; Shibushi-cho: TNS-VS-453607; TNS-VS-453788; Kimotsuki-gun, Uchinoura-cho: TNS-VS-453590, TNS-VS-1032039, TNS-VS-1032042; Koyama-cho: KYO 00010212; Onejime-cho: TNS-VS-802899; Tashiro-cho: TNS-VS-276572, TNS-VS-276573, TNS-VS-453604, TNS-VS-1031949, TNS-VS-1031950, TNS-VS-1031982; Sata-cho: TNS-VS-81922, TNS-VS-81923, TNS-VS-453603, TNS-VS-453621; Yaku Isl./Kumage-gun, Kamiyaku-cho: TNS-VS-368324, TNS-VS-453626, TNS-VS-453627, NS-VS-775466, TNS-VS-778953, TNS-VS-778954,

TNS-VS-778955, TNS-VS-778956, TNS-VS-778961, TNS-VS-778962, TNS-VS-778965, TNS-VS-802855, TNS-VS-925912, TNS-VS-929501, TNS-VS-1031924, TNS-VS-1032045, TNS-VS-1032046; Yaku Isl./Kumage-gun, Yaku-cho: TNS-VS-318048, TNS-VS-453594, TNS-VS-453596, TNS-VS-453597, TNS-VS-453897, TNS-VS-710322, TNS-VS-778948, TNS-VS-778949, TNS-VS-778951, TNS-VS-778957, TNS-VS-778960, TNS-VS-778964, TNS-VS-802862a/b, TNS-VS-802863, TNS-VS-802864, TNS-VS-802876, TNS-VS-802895, TNS-VS-802896, TNS-VS-1031918, TNS-VS-1031919, TNS-VS-1031920, TNS-VS-1031937; Tanegashima Isl./Nishinoomote-shi: TNS-VS-514287; Kuroshima Isl./Kagoshima-gun Mishima-mura: TNS-VS-453784.

Okinawa Pref. Naha-shi: TNS-VS-778360; Kunigami-gun, Kunigami-son: TNS-VS-793441, KAG s.n. (S. Hatusima 12851A), TI 00000589, TI 00000592; Higashi-son: TNS-VS-778362; Onna-son: TNS-VS-518028.

Vandenboschia nipponica (Nakai) Ebihara (Figs. 2, 14)

Hokkaido Pref. Isoya-gun, Rankoshi-cho: TNS-VS-9516590.

Aomori Pref. Aomori-shi: TNS-VS-524459, TNS-VS-778927, TNS-VS-778935, TNS-VS-778937, TNS-VS-778938, TNS-VS-778939, TI 00000234; Kamikita-gun, Towadako-machi: TNS-VS-463347, TNS-VS-524468, TNS-VS-710920, TNS-VS-778928, TNS-VS-778936; Shimokita-gun, Ohata-machi: YMG 0031214.

Akita Pref. Oga-shi: TNS-VS-452382, TNS-VS-778931, TNS-VS-778932, TNS-VS-778933, TNS-VS-778934; Kitaakita-gun, Hinai-machi: TNS-VS-461404; Senboku-gun, Nishisenboku-machi: TNS-VS-548015.

Miyagi Pref. Toda-gun, Tajiri-cho: TNS-VS-9516641.

Yamagata Pref. Yonezawa-shi: TNS-VS-460993, KYO 00010230; Tsuruoka-shi: TNS-VS-460992, TNS-VS-779189, TNS-VS-793419; Nishiokitama-gun, Iidemachi: TNS-VS-460985, KYO 00010231; Oguni-machi: TNS-VS-303644, TNS-VS-459703, KYO 00010602; Higashitagawa-gun, Asahi-mura: TNS-VS-460706; Mogami-gun, Okura-mura: TNS-VS-384256; Akumi-gun, Yuza-machi: TNS-VS-448779; Hirata-machi: TNS-VS-460998.

Fukushima Pref. Shirakawa-shi: TNS-VS-388510.

Chiba Pref. Kimitsu-shi: TNS-VS-779075, TNS-VS-779083.

Niigata Pref. Nagaoka-shi: TNS-VS-778905; Murakami-shi: TNS-VS-779205; Nishikanbara-gun, Yahiko-mura: TNS-VS-779071; Maki-machi: TNS-VS-779062; Minamiuonuma-gun, Yuzawa-machi: TNS-VS-779066, TNS-VS-927254; Nakakubiki-gun, Myokokogen-machi: TNS-VS-747790, TNS-VS-1031935; Iwafune-gun, Asahi-mura: TNS-VS-793475.

Toyoama Pref. Nakaniikawa-gun, Kamiichi-machi: TNS-

- VS-778350; Tateyama-machi: KYO 00010600; Higashitonami-gun, Kamitaira-mura: TNS-VS-793464.
- Ishikawa Pref.** Kanazawa-shi: TI 00000240; Ishikawa-gun, Shiramine-mura: TNS-VS-540621, KYO 00010631.
- Hyogo Pref.** Sayo-gun, Nanko-cho: KYO 00010384.
- Tottori Pref.** Saihaku-gun, Daisen-cho: TNS-VS-388324, TNS-VS-512953, TNS-VS-512956, KYO 00010620.
- Kumamoto Pref.** Kikuchi-shi: KYO 00010615, OSA 00008365; Aso-gun, Soyo-machi: TNS-VS-793453.
- Oita Pref.** Kusu-gun, Kusu-machi: TNS-VS-779209, TNS-VS-779210, KYO 00010618; Hita-gun, Amagase-machi: TNS-VS-456735.
- Kagoshima Pref.** Aira-gun, Yokogawa-cho: TNS-VS-453783.
- Vandenboschia birmanica* (Bedd.) Ching (Figs. 3, 15)
- Shizuoka Pref.** Kamo-gun, Nishiizu-cho: TNS-VS-147168, TNS-VS-168022, TNS-VS-223704, TNS-VS-331780, TNS-VS-778646, TNS-VS-1031971.
- Wakayama Pref.** Nishimuro-gun, Shirahama-cho: TNS-VS-162628, KYO 00010565, TI 00042245.
- Tokushima Pref.** Kaifu-gun, Kainan-cho: TNS-VS-779164.
- Kumamoto Pref.** Hitoyoshi-shi: TNS-VS-141834; Minamata-shi: TNS-VS-144661, KYO 00010524; Yatsushiro-gun, Sakamoto-mura: TNS-VS-293570.
- Miyazaki Pref.** Miyazaki-shi: TNS-VS-803076, KYO 00010523; Nichinan-shi: TNS-VS-680978, TNS-VS-1031997.
- Kagoshima Pref.** Kagoshima-shi: TNS-VS-458392, TNS-VS-778952, TNS-VS-793433; Ibusuki-shi: TNS-VS-405007; Ibusuki-gun, Kiire-cho: TNS-VS-793442; Kawanabe-gun, Chiran-cho: TNS-VS-9516571; Satsuma-gun, Kedoin-cho: TNS-VS-458393; Satsuma-cho: TNS-VS-777026; Isa-gun, Hishikari-cho: TNS-VS-147404, TNS-VS-148279, TNS-VS-148280; Aira-gun, Aira-cho: KYO 00010525; So-gun, Shibushi-cho: TNS-VS-35821, TNS-VS-102774, TNS-VS-187220; Yaku Isl./Kumage-gun, Kamiyaku-cho: TNS-VS-342344; Yaku Isl./Yaku-cho: KYO 00010026; Kuroshima Isl./Oshima-gun, Mishima-mura: KAG s.n. (S. Sako 621), KAG s.n. (K. Maruno, 1980-11-3); Nakanoshima Isl./Toshima-mura: TNS-VS-803077a/b/c; Kuchinoshima Isl./Toshima-mura: KAG s.n. (S. Hatusima 16131); Takarajima Isl./Toshima-mura: KAG s.n. (S. Sako 4489); Gaja Isl./Toshima-mura: KAG s.n. (S. Sako & K. Kawanabe 2347); Amami-oshima Isl./Naze-shi: TNS-VS-311716, TNS-VS-311723, TNS-VS-518086, TNS-VS-518096, TNS-VS-518097, TNS-VS-779191, TNS-VS-779192, TNS-VS-779193, TNS-VS-779194, TNS-VS-779195, TNS-VS-779197, TNS-VS-779198, TNS-VS-779200, TNS-VS-779201, TNS-VS-312906; Amami-oshima Isl./Oshima-gun, Uken-son: TNS-VS-28299, TNS-VS-140651; Sumiyoson: TNS-VS-311021, TNS-VS-311714, TNS-VS-311715, TNS-VS-311717, TNS-VS-311721, TNS-VS-311722, TNS-VS-453794, TNS-VS-465169, TNS-VS-518085, TNS-VS-779196, TNS-VS-779199, TNS-VS-1031897; Tokunoshima Isl./Amagi-cho.: RYU 34713.
- Okinawa Pref.** Nago-shi: TNS-VS-778358, RYU 29586, RYU 28605, TI 00000193; Kunigami-gun, Kunigami-son: TNS-VS-296632, TNS-VS-315138, TNS-VS-316756, TNS-VS-775468, TNS-VS-778355, TNS-VS-779185, TNS-VS-779186, TNS-VS-779187, TNS-VS-779188, TNS-VS-1031978, KYO 00010001, RYU 22602, RYU 22603, RYU 42395, RYU 42396, RYU 17203, RYU 29598, RYU 40646, RYU 29581, RYU 6669, RYU 29606, RYU 29761, RYU 29578, RYU 42393, RYU 21913, RYU 17157, RYU 42398, RYU 42391; Onna-son: TNS-VS-216129; Ginoza-son: RYU 21958.
- Vandenboschia subclathrata* K.Iwats. (Figs. 4, 16)
- Okinawa Pref.** Ishigaki-shi: TNS-VS-803079; Yaeyama-gun, Taketomi-cho: TNS-VS-103250, TNS-VS-109026, TNS-VS-296621, TNS-VS-316737, TNS-VS-316738, TNS-VS-316739, TNS-VS-316740, TNS-VS-316741, TNS-VS-316742, TNS-VS-316743, TNS-VS-368652, TNS-VS-368932, TNS-VS-369149, TNS-VS-369697, TNS-VS-370494, TNS-VS-370511, TNS-VS-370514, TNS-VS-370525, TNS-VS-466957, TNS-VS-503478, TNS-VS-503479, TNS-VS-518027, TNS-VS-551868, TNS-VS-551940, TNS-VS-561860, TNS-VS-732047, TNS-VS-778352, TNS-VS-778353, TNS-VS-778354, TNS-VS-778359, TNS-VS-936776, TNS-VS-936777, TNS-VS-936830, TNS-VS-943079, TNS-VS-1032051, TNS-VS-1032052, TNS-VS-1032053, TNS-VS-1032054, TNS-VS-1032055, TNS-VS-9505717, TNS-VS-9505809, TNS-VS-9505810, TNS-VS-9506675, TNS-VS-9519977.
- Vandenboschia hokurikuensis* Ebihara (Fig. 5)
- Saitama Pref.** Chichibu-gun, Ogano-machi: TNS-VS-779090.
- Kanagawa Pref.** Yokosuka-shi: TNS-VS-779232.
- Niigata Pref.** Niitsu-shi: TNS-VS-779060; Kamo-shi: TNS-VS-779061.
- Fukui Pref.** Fukui-shi: TNS-VS-778339, TNS-VS-778348; Yoshida-gun, Eiheiji-cho: TNS-VS-775470, TNS-VS-778344, TNS-VS-778345, TNS-VS-778346, TNS-VS-778347, TNS-VS-779049.
- Shizuoka Pref.** Shimoda-shi: TNS-VS-778640.
- Aichi Pref.** Nukata-gun, Nukata-cho: TNS-VS-778944.
- Mie Pref.** Iinagan-gun, Iitaka-cho: TNS-VS-779053.
- Kyoto Pref.** Kyoto-shi: TNS-VS-779055.
- Hyogo Pref.** Hikami-gun, Aogaki-cho: TNS-VS-779059.
- Nara Pref.** Tenri-shi: TNS-VS-779035; Yoshino-gun,

Nishiyoshino-mura: TNS-VS-779054.

Shimane Pref. Nima-gun, Yunotsu-machi: TNS-VS-778653.

Okayama Pref. Katsuta-gun, Shoboku-cho: TNS-VS-778365, TNS-VS-779057.

Hiroshima Pref. Hiba-gun, Takano-cho: TNS-VS-779056.

Yamaguchi Pref. Yamaguchi-shi: TNS-VS-779058.

Vandenboschia orientalis (C.Chr.) Ching (Fig. 6)

Tokyo Pref. Hachijo Isl./Hachijo-machi: TNS-VS-778667, TNS-VS-778668, TNS-VS-778669; Aogashima Isl./Aogashima-mura: TNS-VS-778911, TNS-VS-778912.

Kanagawa Pref. Yokosuka-shi: TNS-VS-779234, TNS-VS-779236.

Shizuoka Pref. Ito-shi: TNS-VS-778907, TNS-VS-778908; Shimoda-shi: TNS-VS-778645, TNS-VS-778909, TNS-VS-778910; Tagata-gun, Nakaizu-cho: TNS-VS-778650.

Osaka Pref. Izumisano-shi: TNS-VS-778624; Minamikawachi-gun, Chihayaakasaka-mura: TNS-VS-778613.

Tottori Pref. Tohaku-gun, Yurihama-cho: TNS-VS-778654.

Shimane Pref. Yatsuka-gun, Shimane-cho: TNS-VS-778662.

Oita Pref. Hita-gun, Amagase-machi: TNS-VS-779211.

Miyazaki Pref. Miyazaki-shi: TNS-VS-778633, TNS-VS-778634.

Kagoshima Pref. Amami-oshima Isl./Naze-shi: TNS-VS-311708, TNS-VS-453618, TNS-VS-779202, TNS-VS-779204; Okuchi-shi: TNS-VS-778958; Amami-oshima Isl./Oshima-gun, Sumiyo-son: TNS-VS-311713, TNS-VS-1031898.

Okinawa Pref. Kunigami-gun, Kunigami-son: TNS-VS-778356.

Vandenboschia miuraensis Ebihara (Fig. 7)

Kanagawa Pref. Yokohama-shi/Kamakura-shi: TNS-VS-779179, TNS-VS-779181, TNS-VS-779182, TNS-VS-779183; Yokosuka-shi: TNS-VS-777652; Fujisawa-shi: TNS-VS-779180.

Vandenboschia oshimensis (H.Christ) Ebihara (Fig. 8)

Kagoshima Pref. Amami-oshima Isl.: KYO 00042390.

Okinawa Pref. Naha-shi: TNS-VS-778920, TNS-VS-778921, RYU 28603; Kunigami-gun, Kunigami-son: TNS-VS-778916, TNS-VS-778917, TNS-VS-778918, TNS-VS-778919, KYO 00010038, KYO 00010042, KYO 00010043, RYU 42392, RYU 17139, OSA 00111822, OSA 00155035.

Vandenboschia ×stenosiphon (H.Christ) Copel. (Fig. 9)

Hokkaido Pref. Hiyama-gun, Assabu-cho: TNS-VS-9516588; Shimamaki-gun, Shimamaki-mura: TNS-VS-802970, TNS-VS-802971, TNS-VS-802972; Iwanai-gun, Kyowa-mura: TNS-VS-9516589; Furuu-gun, Kamoenai-mura: TNS-VS-9516599, KYO 00010224; Yoichi-gun, Akaigawa-mura: TNS-VS-9516598; Esashi-gun, Nakatonbetsu-cho: TNS-VS-105904.

Aomori Pref. Aomori-shi: TNS-VS-524467, TI 00000218; Hirosaki-shi: TNS-VS-524464; Higashitsugaru-gun, Kanita-machi: TNS-VS-524465; Tairadate-mura: TNS-VS-524457; Minmaya-mura: TNS-VS-366201, TNS-VS-524461, TNS-VS-524462; Nishitsugaru-gun, Fukaura-machi: TNS-VS-524458; Nakatsugaru-gun, Soma-mura: TNS-VS-524463; Kamikita-gun, Yokohama-machi: TNS-VS-524466; Shimokita-gun, Ohata-machi: TNS-VS-463346, TNS-VS-710917; Omamachi: TNS-VS-524460; Wakinosawa-mura: YMG 0031216.

Iwate Pref. Iwate-gun, Shizukuishi-cho: TNS-VS-538453.

Miyagi Pref. Kesennuma-shi: TNS-VS-538452; Izumi-shi: TNS-VS-9516638; Igu-gun, Marumori-machi: TNS-VS-9516637; Miyagi-gun, Matsushima-machi: TNS-VS-50519, TNS-VS-9516639; Miyagi-machi: TNS-VS-9516647; Kurihara-gun, Kurikoma-machi: TNS-VS-286649; Hanayama-mura: TNS-VS-9516645; Mono-gun, Naruse-cho: TNS-VS-9516646; Oshikagun, Onagawa-cho: TNS-VS-9516640.

Akita Pref. Akita-shi: TNS-VS-58801, TNS-VS-461406, TNS-VS-548014; Honjo-shi: TNS-VS-778930; Kitaakita-gun, Takanosu-machi: TNS-VS-461401, TNS-VS-461402, TNS-VS-461403; Hinai-machi: TNS-VS-778929; Kamikoani-mura: TNS-VS-461400; Yamamoto-gun, Futatsui-machi: TNS-VS-461398, TNS-VS-548016, TNS-VS-778926; Hachimori-machi: TNS-VS-452378, TI 00042252; Yuri-gun, Kisakata-machi: TNS-VS-452381, TNS-VS-724141; Chokai-machi: TNS-VS-461405; Higashiyuri-machi: TNS-VS-452376; Ochi-machi: TNS-VS-452379; Senboku-gun, Kyowamachi: TNS-VS-452380; Senboku-machi: TNS-VS-461399; Ogachi-gun, Ogachi-machi: TNS-VS-452377.

Yamagata Pref. Yamagata-shi: TNS-VS-460989; Yonezawa-shi: TNS-VS-793440; Tsuruoka-shi: TNS-VS-448794, TNS-VS-460988, TNS-VS-461002; Shinjoshi: TNS-VS-463793, TNS-VS-461000; Nishimurayama-gun, Nishikawa-machi: KYO 00010597; Mogami-gun, Mamurogawa-machi: TNS-VS-460990, TNS-VS-460991; Tozawa-mura: TNS-VS-461003; Nishiokitama-gun, Oguni-machi: TNS-VS-460705; Higashitagawa-gun, Haguro-machi: TNS-VS-460986; Asahimura: TNS-VS-461001, TNS-VS-793414, TI 00000226; Nishitagawa-gun, Atsumi-machi: TNS-VS-460987, TNS-VS-460994, TNS-VS-460997, TNS-VS-793415, TNS-VS-793416, TNS-VS-793417, TNS-VS-793418;

Akumi-gun, Yuza-machi: TNS-VS-460999; Yawata-machi: TNS-VS-460996, TNS-VS-460995.

Fukushima Pref. Fukushima-shi: TNS-VS-23864; Aizuwakamatsu-shi: TNS-VS-457142; Iwaki-shi: TNS-VS-253963, TNS-VS-341756, TNS-VS-457145, TNS-VS-457146, TNS-VS-457147, TNS-VS-600859, TNS-VS-793382, TNS-VS-793383, TNS-VS-793384, TNS-VS-793386, TNS-VS-793413, TNS-VS-793469, TNS-VS-793470; Minamiaizu-gun, Shimogo-machi: TNS-VS-457151; Tadami-machi: TNS-VS-457143; Yamagun, Atsushiokano-mura: TNS-VS-457149, TNS-VS-457150; Kitashiobara-mura: TNS-VS-457144; Yamato-machi: TNS-VS-793385; Onuma-gun, Aizutakadamachi: TNS-VS-457148, TNS-VS-457152.

Ibaraki Pref. Takahagi-shi: TNS-VS-454430; Kitaibaraki-shi: TNS-VS-454431; Kasama-shi: TNS-VS-454339; Tsukuba-shi: KYO 00010430; Higashiibaraki-gun, Katsura-mura: TNS-VS-454432; Kuji-gun, Satomi-mura: TNS-VS-454429; Niihari-gun, Yasato-machi: TNS-VS-454338; Chiyoda-mura: TNS-VS-454428, TNS-VS-454433.

Tochigi Pref. Utsunomiya-shi: TNS-VS-454199, TNS-VS-212786; Haga-gun, Mashiko-machi: TI 00042271; Motegi-machi: TNS-VS-454198; Nasu-gun, Bato-machi: TNS-VS-449293.

Gunma Pref. Numata-shi: TNS-VS-124141; Tone-gun, Minakami-machi: TNS-VS-793439.

Saitama Pref. Hanno-shi: TNS-VS-577976; Iruma-gun, Ogose-machi: TNS-VS-577281; Naguri-mura: TNS-VS-577974, TNS-VS-802973, TNS-VS-802974, TNS-VS-802975; Hiki-gun, Ogawa-machi: TNS-VS-293112; Chichibu-gun, Ogano-machi: TNS-VS-779081; Arakawa-mura: TNS-VS-577278, TNS-VS-577280; Higashichichibu-mura: TNS-VS-577279; Kodama-gun, Kodama-machi: TNS-VS-577973; Kamikawa-mura: TNS-VS-577975.

Chiba Pref. Kamogawa-shi: TNS-VS-936764; Futtsu-shi: TNS-VS-540086, TNS-VS-540113, TNS-VS-793387, TNS-VS-803043; Awa-gun, Tomiyama-machi: TNS-VS-540081; Chikura-machi: TNS-VS-401365; Amatsukominato-machi: TNS-VS-389572, TNS-VS-803034, TNS-VS-803038, TNS-VS-803042.

Tokyo Pref. Hachioji-shi: TNS-VS-142389, TNS-VS-147879, TNS-VS-247872, TNS-VS-523522, TNS-VS-441601, TNS-VS-459313, TNS-VS-779085, TNS-VS-803017; Ome-shi: TNS-VS-793134, TNS-VS-459312; Nishitama-gun, Itsukaichi-machi: TNS-VS-793467; Okutama-machi: TNS-VS-802954; Hachijo Isl./Hachijo-machi: TNS-VS-81227, TNS-VS-266477.

Kanagawa Pref. Yokosuka-shi: TNS-VS-779231, TNS-VS-779233; Kamakura-shi: TNS-VS-779223, TNS-VS-779224, TNS-VS-779225, TNS-VS-779226, TNS-VS-803004; Zushi-shi: TNS-VS-561708, TNS-VS-647240, TNS-VS-779079, TNS-VS-779089, TNS-VS-

793127, TNS-VS-802979, TNS-VS-802982, TNS-VS-802984, TNS-VS-802985, TNS-VS-802986, TNS-VS-802987; Ashigarashimo-gun, Hakone-machi: TNS-VS-1405, TNS-VS-43236, TNS-VS-115293, TNS-VS-561716, TNS-VS-779219, TNS-VS-779220, TNS-VS-779221, TNS-VS-779222, TNS-VS-9516538; Yugawara-machi: TNS-VS-314968, TNS-VS-779214, TNS-VS-779215, TNS-VS-779216, TNS-VS-779217, TNS-VS-779218, TNS-VS-1031908, TNS-VS-1031952, TNS-VS-9516539, TNS-VS-9516540.

Niigata Pref. Nagaoka-shi: TNS-VS-778906; Kashiwazaki-shi: TNS-VS-9516533, TNS-VS-9516560, TNS-VS-9516557; Shibata-shi: TNS-VS-925925, KYO 00010613; Niitsu-shi: TNS-VS-464870, TNS-VS-779063; Itoigawa-shi: TNS-VS-779067, TNS-VS-9516534, TNS-VS-9516552; Nakakanbara-gun, Muramatsu-machi: TNS-VS-321758, TNS-VS-779072, TNS-VS-9516551; Nishikanbara-gun, Iwamuro-mura: TNS-VS-927252; Minamikanbara-gun, Tagami-mura: TNS-VS-254120; Shitada-mura: TNS-VS-463791, TI 00042267; Higashikanbara-gun, Tsugawa-machi: TNS-VS-793474, TNS-VS-9516558; Kanose-machi: TNS-VS-779070; Santo-gun, Teradomari-machi: TNS-VS-9516597; Kitaonuma-gun, Yunotani-mura: TNS-VS-80484; Irihiro-mura: TNS-VS-1031941, TNS-VS-9516553; Minamiuonuma-gun, Yuzawa-machi: TNS-VS-384590, TNS-VS-779064, TNS-VS-779065; Shiozawa-machi: TNS-VS-9516554; Muika-machi: TNS-VS-779068, TNS-VS-779069; Kariwa-gun, Takayanagi-machi: TNS-VS-793437, TNS-VS-1031930; Nakakubiki-gun, Kakizaki-machi: TNS-VS-102776, TNS-VS-793436, TNS-VS-1031940; Nishikubiki-gun, No-machi: TNS-VS-9516559, KYO 00010601; Omi-machi: TNS-VS-136496, TNS-VS-1031931, TNS-VS-9516555; Iwafune-gun, Arakawa-machi: TNS-VS-9516569; Asahi-mura: TNS-VS-9516556; Sanpoku-machi: TNS-VS-9516535; Sado Isl./Ryotsu-shi: TNS-VS-9516568; Joetsu-shi: TNS-VS-793435, TNS-VS-9516532; Sado Isl./Sado-gun, Aikawa-machi: TNS-VS-9516567; Sado Isl./Mano-machi: TNS-VS-9516596; Sado Isl./Ogi-machi: TNS-VS-9516595, KYO 00010447; Sado Isl./Akadomari-mura: TNS-VS-1031922.

Toiyama Pref. Himi-shi: TNS-VS-465003; Namerikawa-shi: TNS-VS-533271, TNS-VS-9506772, TNS-VS-9506863; Kurobe-shi: KYO 00010604; Oyabe-shi: TNS-VS-533269; Kaminiikawa-gun, Oyama-machi: TNS-VS-533272, RYU 2095; Nakaniikawa-gun, Kamiichi-machi: TNS-VS-152485, TNS-VS-153927, TNS-VS-533274; Shimonikawa-gun, Unazuki-machi: TNS-VS-793428, TNS-VS-793429, TNS-VS-793430; Asahi-machi: TNS-VS-533273, TNS-VS-533278, KYO 00010398; Nei-gun, Yatsuo-machi: TNS-VS-533270; Higashitonami-gun, Toga-mura: TNS-VS-

778349.

Ishikawa Pref. Kanazawa-shi: TNS-VS-136493, TNS-VS-540616, TNS-VS-540626, TNS-VS-925903, KYO 00010606; Nanao-shi: TNS-VS-540630, TNS-VS-540632; Komatsu-shi: TNS-VS-540623, TNS-VS-540624, TNS-VS-568246, TNS-VS-936838; Wajima-shi: TNS-VS-540453, TNS-VS-540483; Suzu-shi: TNS-VS-540457, TNS-VS-540484; Kaga-shi: TNS-VS-309802, TNS-VS-540615; Hakui-shi: TNS-VS-540631; Enuma-gun, Yamanaka-machi: TNS-VS-540618, TNS-VS-540619, TNS-VS-540620, TNS-VS-1031913, KYO 00010424; Nomi-gun, Tatsunokuchimachi: TNS-VS-540625; Ishikawa-gun, Tsurugimachi: TNS-VS-568245; Kawachi-mura: TNS-VS-540617; Yoshinodani-mura: RYU 40598; Oguchimura: TNS-VS-540622; Kahoku-gun, Tsubata-machi: TNS-VS-540627; Hakui-gun, Togi-machi: TNS-VS-540452, TNS-VS-540628; Shika-machi: TNS-VS-540451, TNS-VS-568242, TNS-VS-568243; Oshimizumachi: TNS-VS-540482; Kashima-gun, Kashimamachi: TNS-VS-540629; Fugeshi-gun, Monzen-machi: TNS-VS-540458, TNS-VS-568856, TNS-VS-568857; Yanagida-mura: TNS-VS-540455; Hosu-gun, Anamizumachi: TNS-VS-540456; Noto-cho: TNS-VS-540454.

Fukui Pref. Fukui-shi: TNS-VS-453198, TNS-VS-453207; Tsuruga-shi: TNS-VS-453191; Takefu-shi: TNS-VS-453184, TNS-VS-453194; Obama-shi: TNS-VS-453187; Ono-shi: TNS-VS-453183, TNS-VS-453196, TNS-VS-453200, TNS-VS-453201, TNS-VS-592431, TNS-VS-745198, TNS-VS-1031925, TNS-VS-1031932, TNS-VS-1031936, TNS-VS-1032013; Katsuyama-shi: TNS-VS-453192, TNS-VS-453193, TNS-VS-453197, TNS-VS-592434, TNS-VS-592436, TNS-VS-592468, TNS-VS-778340, TNS-VS-778341, TNS-VS-778342, TNS-VS-778343, TNS-VS-1031963, TNS-VS-9516585, TNS-VS-9516586, KYO 00010393, KYO 00010625; Asuwa-gun, Miyama-cho: TNS-VS-453195, TNS-VS-453199; Yoshida-gun, Matsuoka-cho: TNS-VS-453203; Ono-gun, Izumi-mura: TNS-VS-453205, TNS-VS-453206; Sakai-gun, Kanazu-cho: TNS-VS-453185, TNS-VS-592467; Maruoka-cho: TNS-VS-453204; Nanjo-gun, Imajo-cho: TNS-VS-453209; Kono-mura: TNS-VS-453202, TNS-VS-592432; Nyuu-gun, Asahi-cho: TNS-VS-453210; Mikata-gun, Mikata-cho: TNS-VS-453182, TNS-VS-453208; Onyuu-gun, Kaminaka-cho: TNS-VS-453186; Natasho-mura: TNS-VS-453181, TNS-VS-453190; Oi-gun, Takahama-cho: TNS-VS-453188, Oi-cho: TNS-VS-453189.

Nagano Pref. Shimoina-gun, Achi-mura: TNS-VS-421342; Shimominochi-gun, Sakae-mura: TNS-VS-779073.

Gifu Pref. Tajimi-shi: TNS-VS-464109; Mino-shi: TNS-VS-9516594; Gujo-shi: TNS-VS-778942; Fuwa-gun,

Tarui-cho: TNS-VS-802916; Sekigahara-cho: TNS-VS-793431; Ibi-gun, Kuze-mura: TNS-VS-745436, TNS-VS-9516580; Motosu-gun, Neo-mura: TNS-VS-802845, TNS-VS-9516583; Yamagata-gun, Miyama-cho: TNS-VS-9516581; Mugi-gun, Horado-mura: TNS-VS-462930, TNS-VS-775473; Mugegawa-cho: TNS-VS-462931, TNS-VS-778941; Gujo-gun, Hachiman-cho: TNS-VS-9516578, TNS-VS-9516579, TNS-VS-9516584; Takasu-mura: TNS-VS-9516593; Minami-mura: TNS-VS-259148, TNS-VS-399051, TNS-VS-9516591, KYO 00010622; Kamo-gun, Hichisocho: TNS-VS-802923, TNS-VS-9516582; Ena-gun, Kushihara-mura: TNS-VS-462932; Mashita-gun, Kanayama-cho: TNS-VS-793444; Yoshiki-gun, Miyagawa-mura: TNS-VS-9516592.

Shizuoka Pref. Shizuoka-shi: TNS-VS-449821, TNS-VS-536182; Hamamatsu-shi: TNS-VS-449826, TNS-VS-462632; Numazu-shi: TNS-VS-545460; Shimizu-shi: TNS-VS-536189; Atami-shi: TNS-VS-779213; Mishima-shi: TNS-VS-311219, TNS-VS-536233; Ito-shi: TNS-VS-460365, TNS-VS-536238, TNS-VS-802992; Fuji-shi: TNS-VS-449820, TNS-VS-449840, TNS-VS-536202, TNS-VS-925895; Kakegawa-shi: TNS-VS-925911; Tenryu-shi: TNS-VS-83862, TNS-VS-449811; Shimoda-shi: TNS-VS-536225, TNS-VS-778639, TNS-VS-778649; Susono-shi: TNS-VS-536234, TNS-VS-925897; Kamo-gun, Kawazu-cho: TNS-VS-332537, TNS-VS-449838, TNS-VS-449845, TNS-VS-778648, TNS-VS-803009, TNS-VS-929513; Minamiizu-cho: TNS-VS-311884; Matsuzaki-cho: TNS-VS-449814, TNS-VS-925910; Nishiizu-cho: TNS-VS-449837, TNS-VS-779131; Tagata-gun, Shuzenji-cho: TNS-VS-536206; Amagi-yugashima-cho: TNS-VS-324793, TNS-VS-449816, TNS-VS-449846, TNS-VS-802875, TNS-VS-802877, TNS-VS-925908, KYO 00010442; Tagata-gun, Nakaizu-cho: TNS-VS-449835, TNS-VS-1032000; Ihara-gun, Fujikawa-cho: TNS-VS-545459, TNS-VS-745195; Shida-gun, Okabe-cho: TNS-VS-536190; Haibara-gun, Kawane-cho: TNS-VS-545457; Nakakawane-cho: TNS-VS-463489, TNS-VS-536205; Ogasa-gun, Hamaoka-cho: TNS-VS-536191; Shuchi-gun, Mori-machi: TNS-VS-449822; Iwata-gun, Tatsuyama-mura: TNS-VS-449813, TNS-VS-449823; Sakuma-cho: TNS-VS-449809, TNS-VS-449830, TNS-VS-535523, TNS-VS-536183, TNS-VS-536201; Misakubo-cho: TNS-VS-1031962; Inasa-gun, Inasa-cho: TNS-VS-449827, TNS-VS-536185; Mikkabi-cho: TNS-VS-536198, TNS-VS-9516450.

Aichi Pref. Toyohashi-shi: TNS-VS-1031961, TNS-VS-9516549; Okazaki-shi: TNS-VS-463527, TNS-VS-9516566; Toyota-shi: TNS-VS-463529, TNS-VS-465147; Inuyama-shi: TNS-VS-465148; Shinshiro-shi: TNS-VS-463611, TNS-VS-9516547; Chita-gun, Minamichita-cho: TNS-VS-9516550, TNS-VS-9516625;

- Hazu-gun, Kira-cho: TNS-VS-9516631; Nukata-gun, Nukata-cho: TNS-VS-463526, TNS-VS-778943, TNS-VS-778945, TNS-VS-778946, TNS-VS-9516561, TNS-VS-9516565, TNS-VS-9516628; Higashikamo-gun, Asuke-cho: TNS-VS-463530, TNS-VS-9516562, TNS-VS-9516624; Kitashitara-gun, Shitara-cho: TNS-VS-9516634; Toyone-mura: KYO 00010426; Tomiyama-mura: TNS-VS-9516564, TNS-VS-9516632; Minamishitara-gun, Horai-cho: TNS-VS-45782, TNS-VS-463528, TNS-VS-802912, TNS-VS-802913, TNS-VS-1031943, TNS-VS-9516548, TNS-VS-9516563, TNS-VS-9516577, TNS-VS-9516633, TNS-VS-9516635, TNS-VS-9516636, KYO 00010610, KYO 00010428; Hoi-gun, Otowa-cho: TNS-VS-9516626.
- Mie Pref.** Ise-shi: TNS-VS-1031981, TNS-VS-1032017; Nabari-shi: TNS-VS-247311, TNS-VS-537841; Owase-shi: TNS-VS-537832, TNS-VS-716318, TNS-VS-803007, TNS-VS-1031917, TNS-VS-1031944, TNS-VS-1031951, YMG 0126486; Toba-shi: TNS-VS-537834; Kumano-shi: TNS-VS-247300, TNS-VS-537843, KYO 00010272; Iga-shi: KYO 00010278; Kuwana-gun, Tado-cho: TNS-VS-537839, TNS-VS-803006; Age-gun, Geino-cho: TNS-VS-537919; Ichishi-gun, Misugi-mura: TNS-VS-63415; Iinan-gun, Iitaka-cho: TNS-VS-537844; Taki-gun, Miyagawa-mura: TNS-VS-779044, KYO 00010261; Watarai-gun, Tamaki-cho: KYO 00010245; Nansei-cho: TNS-VS-537840; Watarai-cho: TNS-VS-537917; Kitamuro-gun, Miyama-cho: TNS-VS-343889, TNS-VS-537916, KYO 00010250, KYO 00010264; Minamimuro-gun, Mihama-cho: YMG 0126491; Kiho-cho: TNS-VS-537831, TNS-VS-568244.
- Shiga Pref.** Otsu-shi: TNS-VS-17706, KYO 00010375, KYO 00010374; Hikone-shi: TNS-VS-585585; Sakata-gun, Ibuki-cho: TNS-VS-585586; Ika-gun, Nishiazai-cho: TNS-VS-585584.
- Kyoto Pref.** Kyoto-shi: TNS-VS-1407, TNS-VS-277535, TNS-VS-1031939, KYO 00010363, KYO 00010376; Kameoka-shi: TNS-VS-194843; Nagaokakyo-shi: TNS-VS-277536; Yawata-shi: KYO 00010352; Otokuni-gun, Oyamazaki-mura: TNS-VS-277540; Kitakuwada-gun, Miyama-cho: TNS-VS-247313, TNS-VS-802846; Funai-gun, Wachi-cho: KYO 00010386; Kasa-gun, Oe-cho: TNS-VS-678726, TNS-VS-678727, KYO 00010355.
- Osaka Pref.** Takatsuki-shi: TNS-VS-247044; Izumisano-shi: TNS-VS-778609, TNS-VS-778610, TNS-VS-778611; Kawachinagano-shi: TNS-VS-247333, TNS-VS-775472, TNS-VS-778608, TNS-VS-778616, TNS-VS-778617, TNS-VS-778618, TNS-VS-778625; Matsubara-shi: TNS-VS-379053; Izumi-shi: TNS-VS-778604, TNS-VS-778605, TNS-VS-778612, TNS-VS-778615; Mino-shi: TNS-VS-584448; Minamikawachi-gun, Kanan-cho: TNS-VS-778614.
- Hyogo Pref.** Kobe-shi: TNS-VS-554756, TNS-VS-554757, TNS-VS-9516609, KYO 00010349; Nishinomiya-shi: KYO 00010377; Sasayama-shi: TNS-VS-778619, KYO 00010350; Taka-gun, Kami-cho: TNS-VS-584447, TNS-VS-584570; Kasai-gun, Hojochi: TNS-VS-554760; Shikama-gun, Yumesaki-cho: TNS-VS-554759; Kanzaki-gun, Kanzaki-cho: KYO 00010388; Sayo-gun, Sayo-cho: TNS-VS-554755; Kozuki-cho: TNS-VS-541004; Nanko-cho: TNS-VS-141936, TNS-VS-584609, TNS-VS-802882; Shiso-gun, Yamasaki-cho: TNS-VS-584446; Yasutomi-cho: TNS-VS-379054; Ichinomiya-cho: KYO 00010354; Haga-cho: TNS-VS-584445, KYO 00010385; Mikatagun, Muraoka-cho: TNS-VS-584569, TNS-VS-778620, TNS-VS-778621; Mikata-gun, Hamasaka-cho: TNS-VS-778622, TNS-VS-778623; Onsen-cho: TNS-VS-554758; Yabu-gun, Yabu-cho: TNS-VS-584444; Oya-cho: TNS-VS-584571; Hikami-gun, Hikami-cho: KYO 00010379, KYO 00010360; Taki-gun, Tannan-cho: TNS-VS-247312, KYO 00010371.
- Nara Pref.** Nara-shi: TNS-VS-583708, TNS-VS-583711, TNS-VS-779041; Sakurai-shi: TNS-VS-583709; Uda-gun, Haibara-cho: TNS-VS-779047; Muro-mura: TNS-VS-132713, TNS-VS-779038, TNS-VS-779042; Yoshino-gun, Yoshino-cho: TNS-VS-779048, TNS-VS-779203; Shimoichi-cho: TNS-VS-583707; Totsukawamura: TNS-VS-583712, TNS-VS-583713, TNS-VS-779043, TNS-VS-793443; Shimokitayama-mura: KYO 00010365; Kamikitayama-mura: TNS-VS-779039; Kawakami-mura: TNS-VS-779036, TNS-VS-779046; Higashiyoshino-mura: TNS-VS-779040, KYO 00010357.
- Wakayama Pref.** Kainan-shi: TNS-VS-937964; Naga-gun, Momoyama-cho: TNS-VS-937968; Ito-gun, Koya-cho: KYO 00010265; Arita-gun, Kibi-cho: TNS-VS-937966; Shimizu-cho: TNS-VS-42978, TNS-VS-937965, TI 00000210; Nishimuro-gun, Nakahechi-cho: TNS-VS-937937; Kamitonda-cho: KYO 00010251; Hikigawa-cho: TNS-VS-937947; Susami-cho: KYO 00010271; Higashimuro-gun, Nachikatsuura-cho: TNS-VS-37586, TNS-VS-80483, TNS-VS-217096, TNS-VS-937941, TNS-VS-937950, TNS-VS-1032021; Kozagawa-cho: TNS-VS-1031926, TNS-VS-1031933, TNS-VS-1031946, TNS-VS-1032022, YMG 0042719; Kumanogawa-cho: TNS-VS-937957, TNS-VS-937958; Honguu-cho: TNS-VS-802930, KYO 00010246, KYO 00010252; Kitayama-mura: TNS-VS-937959.
- Tottori Pref.** Tottori-shi: TNS-VS-452643, TNS-VS-778658; Yonago-shi: TNS-VS-782819; Iwami-gun, Kokufu-cho: TNS-VS-452642; Fukube-son: KYO 00010239; Yazu-gun, Hatto-cho: TNS-VS-452645; Wakasa-cho: KYO 00010241; Mochigase-cho: TI 00042277; Chizu-cho: TNS-VS-452715; Tohaku-gun, Togo-cho: TNS-VS-452641; Misasa-cho: TNS-VS-

144728, TNS-VS-452640, TNS-VS-452714, TNS-VS-1031929; Kotora-cho: TNS-VS-778659; Saihaku-gun, Saihaku-cho: TNS-VS-462672; Daisen-cho: TNS-VS-265341, TNS-VS-452646; Hino-gun, Nichinan-cho: TNS-VS-462671; Hino-cho: TNS-VS-452639; Mizokuchi-cho: TNS-VS-462670.

Shimane Pref. Matsue-shi: TNS-VS-9516602; Izumoshi: YMG 0050667Oda-shi: KYO 00010235, KYO 00010624; Yasugi-shi: YMG 0049298; Hirata-shi: TNS-VS-330898, TNS-VS-384239; Yatsuka-gun, Shimane-cho: TNS-VS-9516604; Mihonoseki-cho: TNS-VS-9516601; Shinji-cho: TNS-VS-9516541; Nogi-gun, Hirose-machi: TNS-VS-778655, TNS-VS-778661; Nita-gun, Yokota-cho: TNS-VS-39380, TNS-VS-9516605; Iishi-gun, Mitoya-cho: YMG 0049373; Akagi-cho: TNS-VS-38891, KYO 00010626; Hikawa-gun, Taisha-machi: TNS-VS-9516610; Ochi-gun, Daiwa-mura: TNS-VS-745593; Hasumi-mura: TNS-VS-523951; Mino-gun, Mito-cho: YMG 0128490; Kanoashi-gun, Tsuwano-cho: YMG 0126498, YMG 0126502; Nichihara-cho: YMG 0126496, YMG 0126503, YMG 0035314, YMG 0031243; Muikaichimachi: YMG 0045937; Oki-gun, Fuse-mura: TNS-VS-778660, TI 00000237; Oki-gun, Goka-mura: YMG 0126492.

Okayama Pref. Okayama-shi: TNS-VS-451854; Takahashi-shi: TNS-VS-330890; Niimi-shi: TNS-VS-451849, TNS-VS-537134, TNS-VS-595834, TNS-VS-778372; Mitsu-gun, Mitsu-cho: TNS-VS-778370; Kawakami-gun, Nariwa-cho: YMG 0126485; Atetsu-gun, Osa-cho: TNS-VS-451851, TNS-VS-537135; Shingo-cho: TNS-VS-451846, TNS-VS-451852, KYO 00010237; Tetta-cho: TNS-VS-451848, TNS-VS-451850; Tessei-cho: TNS-VS-451847; Maniwa-gun, Katsuyama-cho: TNS-VS-463210, TNS-VS-595832; Ochiai-cho: TNS-VS-451853; Yubara-cho: TNS-VS-778369; Kuse-cho: TNS-VS-595833; Shinjo-son: TNS-VS-537133; Chuuka-son: TNS-VS-745196, TNS-VS-778371, TNS-VS-793461; Tomata-gun, Okutsu-cho: TNS-VS-778364; Okutsu-cho: TNS-VS-778373; Kamisaibara-son: TNS-VS-778363; Kagamino-cho: TNS-VS-778375; Katsuta-gun, Nagi-cho: YMG 0047450; Shoboku-cho: TNS-VS-778366; Kume-gun, Kume-cho: TNS-VS-778374.

Hiroshima Pref. Hiroshima-shi: TNS-VS-385310, TNS-VS-387077, TNS-VS-793389, TNS-VS-793394, TNS-VS-793395, TNS-VS-9516544; Otake-shi: TNS-VS-385311, TNS-VS-793390; Aki-gun, Kamagari-cho: TNS-VS-385312, TNS-VS-793388; Saeki-gun, Hatsuoka-cho: TNS-VS-793398, TNS-VS-793434; Yuki-cho: TNS-VS-793397; Saeki-cho: TNS-VS-793396; Asa-gun, Gion-cho: TNS-VS-9516545; Yamagata-gun, Kake-cho: YMG 0031245; Geihoku-cho: TNS-VS-449319, TNS-VS-793392; Takata-gun, Takamiya-cho:

TNS-VS-793466; Jinseki-gun, Yuki-cho: TNS-VS-793449; Hiba-gun, Takano-cho: TNS-VS-778367; Hiwa-cho: TNS-VS-793468.

Yamaguchi Pref. Shimonoseki-shi: YMG 0079589; Yamaguchi-shi: TNS-VS-778368, TNS-VS-778376, TNS-VS-778377, YMG 0001646; Hagi-shi: YMG 0034402; Tokuyama-shi: TNS-VS-745197, YMG 0072207, YMG 0126472, YMG 0079580, YMG 0085479, KYO 00010232; Iwakuni-shi: TNS-VS-793445, TNS-VS-793446, TNS-VS-793447, TNS-VS-793448, YMG 0071661; Nagato-shi: YMG 0079591; Yanai-shi: TNS-VS-535242; Shinnanyo-shi: TNS-VS-793455, YMG 0069294, YMG 0071205; Oshima-gun, Oshima-cho: TNS-VS-793452; Kuga-gun, Hongo-son: YMG 0073264; Nishiki-cho: TNS-VS-276002; Mikawa-cho: YMG 0070591; Tsuno-gun, Kano-cho: TNS-VS-276001; Saba-gun, Tokuji-cho: YMG 0079594, YMG 0017938, YMG 0079595; Toyora-gun, Kikugawa-cho: YMG 0035910; Toyota-cho: YMG 0035270, YMG 0003578, YMG 0017940, YMG 0035154, YMG 0017961, YMG 0126477, YMG 0014012, YMG 0126461; Mine-gun, Mito-cho: YMG 0126499, YMG 0055280, YMG 0005265; Otsu-gun, Misumi-cho: YMG 0126473; Abu-gun, Kawakami-son: YMG 0079596, YMG 0017945, YMG 0079593; Abu-cho: YMG 0041079, TNS-VS-559738, TNS-VS-559741, YMG 0034563, YMG 0059101, YMG 0025522; Asahi-son: YMG 0126464, YMG 0017933.

Tokushima Pref. Tokushima-shi: TNS-VS-9516622, KYO 00010619; Naka-gun, Kaminaka-cho: TNS-VS-174927, TNS-VS-779169, TNS-VS-9516612, TNS-VS-9516613; Kisawa-son: TNS-VS-9516607, KYO 00010469; Kito-son: TNS-VS-321856, TNS-VS-9516606; Kaifu-gun, Mugi-cho: TNS-VS-9516617; Kainan-cho: TNS-VS-9516611; Oe-gun, Kawashima-cho: TNS-VS-9516618; Yamakawa-cho: TNS-VS-9516619; Mima-gun, Handa-cho: TNS-VS-9516615; Sadamitsu-cho: TNS-VS-1031923; Anabuki-cho: TNS-VS-585390; Miyoshi-gun, Yamashiro-cho: TNS-VS-9516616.

Kagawa Pref. Shozu-gun, Uchinomi-cho: TNS-VS-9516642; Mitoyo-gun, Mino-cho: TNS-VS-9516630.

Ehime Pref. Matsuyama-shi: TNS-VS-525389; Uwajima-shi: TNS-VS-282160; Kawano-cho: KYO 00010475; Hojo-shi: YMG 0074572; Shuso-gun, Tanbara-cho: TNS-VS-779163; Kamiukena-gun, Omogo-mura: TNS-VS-793463; Oda-cho: TNS-VS-525385; Higashiwa-gun, Uwa-cho: TNS-VS-525388; Kitauwa-gun, Hiyoshi-mura: TNS-VS-525390; Minamiuwa-gun, Johen-cho: KYO 00010483.

Kochi Pref. Kochi-shi: TNS-VS-1031928, TNS-VS-1031942, TNS-VS-1031945; Tosa-shi: TNS-VS-54863; Nakamura-shi: TNS-VS-553426; Tosashimizu-shi: TNS-VS-553182, TNS-VS-779176; Aki-gun,

Toyo-cho: TNS-VS-553408; Nahari-cho: TNS-VS-553185; Kami-gun, Tosayamada-cho: TNS-VS-384351, TNS-VS-553429; Monobe-son: TNS-VS-553183, TNS-VS-1031956, TNS-VS-1031957, MBK 0027858; Nagaoka-gun, Motoyama-cho: TNS-VS-553415, TNS-VS-553631, TNS-VS-1031938, KYO 00010461; Tosa-gun, Tosa-cho: TNS-VS-553412, TNS-VS-1031910; Okawa-mura: TNS-VS-553414; Agawa-gun, Ikegawa-cho: TNS-VS-553413, KYO 00010471; Gohoku-son: TNS-VS-553416, TNS-VS-553417; Takaoka-gun, Sakawa-cho: MBK 0019990, KYO 00010465; Ochi-cho: TNS-VS-779178; Yusuhara-cho: TNS-VS-553184; Onomi-son: TNS-VS-553411, TNS-VS-1032003, TNS-VS-1032004, TNS-VS-1032028; Niyodo-mura: TI 00000555; Hata-gun, Taisho-cho: TNS-VS-460837, TNS-VS-1031927; Towa-son: TNS-VS-1031980.

Fukuoka Pref. Kitakyushu-shi: TNS-VS-589853; Kurume-shi: TNS-VS-1031999; Amagi-shi: TNS-VS-590373, KYO 00010595; Maebaru-shi: TNS-VS-778637; Chikushi-gun, Nakagawa-machi: TNS-VS-778631; Kasuya-gun, Umi-machi: TNS-VS-590372; Sasaguri-machi: TNS-VS-590371; Kaho-gun, Chikuhomachi: TNS-VS-512952; Itoshima-gun, Maebaru-machi: TNS-VS-590379; Nijo-machi: TNS-VS-590380; Yame-gun, Kurogi-machi: TNS-VS-590374; Tachibana-machi: TNS-VS-590375; Yabe-mura: TNS-VS-590370; Hoshino-mura: TNS-VS-590369; Tagawa-gun, Soeda-machi: TNS-VS-589854; Kawasaki-machi: TNS-VS-589855; Miyako-gun, Saigawa-machi: TNS-VS-590397.

Saga Pref. Imari-shi: TNS-VS-536403, TNS-VS-536404; Saga-gun, Yamato-cho: TNS-VS-536411; Kanzaki-gun, Higashisefuri-son: TNS-VS-536397, TNS-VS-778635; Higashimatsuura-gun, Kyuuragi-machi: TNS-VS-536408; Kitahata-mura: TNS-VS-778628; Nishimatsuura-gun, Nishiarita-cho: TNS-VS-536401.

Nagasaki Pref. Nagasaki-shi: TNS-VS-461512, TNS-VS-480531; Shimabara-shi: TNS-VS-793401, KYO 00010214; Omura-shi: TNS-VS-100193; Nishisonogi-gun, Seihi-cho: TNS-VS-793408; Sotome-cho: TNS-VS-480562; Higashisonogi-gun, Higashisonogi-cho: TNS-VS-480529, TNS-VS-480533; Kitatakaki-gun, Takaki-cho: TNS-VS-100195, TNS-VS-793400, TNS-VS-1031934; Iki Isl./Iki-gun, Gonora-cho: TNS-VS-1031909; Shimoagata-gun, Mitsushima-cho: TNS-VS-793404; Kamiagata-gun, Kamitsushima-cho: TNS-VS-793410.

Kumamoto Pref. Kumamoto-shi: TNS-VS-455285; Hitoyoshi-shi: TNS-VS-583585, TNS-VS-802929, KYO 00010139; Kikuchi-shi: TNS-VS-455287; Kamoto-gun, Kahoku-machi: TNS-VS-465093; Aso-gun, Aso-machi: TNS-VS-455286; Minamioguni-machi: YMG 0081108; Namino-son: TNS-VS-463030; Kamimashiki-gun, Mifune-machi: TNS-VS-455297; Mashiki-

machi: TNS-VS-455292, TNS-VS-455298; Yabemachi: TNS-VS-455300, TNS-VS-583583, TNS-VS-583584, TNS-VS-778333; Yatsushiro-gun, Toyo-mura: TNS-VS-455296; Ashikita-gun, Tsunagi-machi: TNS-VS-455160; Kuma-gun, Nishiki-machi: TNS-VS-376714; Taragi-machi: KYO 00010142; Mizukamura: TNS-VS-455282, TNS-VS-583609; Itsuki-mura: TNS-VS-332447, TNS-VS-793450; Yamae-mura: TNS-VS-778334, TNS-VS-778336; Kuma-mura: TNS-VS-455158.

Oita Pref. Oita-shi: TNS-VS-456729; Hita-shi: TNS-VS-456753, YMG 0079607; Taketa-shi: TNS-VS-50515, TNS-VS-456740, TNS-VS-456745; Usa-shi: TNS-VS-456754; Nishikunisaki-gun, Kakaji-cho: TNS-VS-456750; Higashikunisaki-gun, Aki-machi: TNS-VS-456728; Oita-gun, Shonai-cho: TNS-VS-456748; Yufuin-cho: YMG 0079604; Minamiamabe-gun, Umemachi: TNS-VS-456732; Ono-gun, Mie-machi: TNS-VS-456739, YMG 0042972; Kiyokawa-mura: TNS-VS-456730, TNS-VS-456734; Ogata-machi: TNS-VS-456731; Asaji-machi: TNS-VS-456755; Ono-machi: YMG 0079608; Naoiri-gun, Kujuu-machi: TNS-VS-456743; Kusu-gun, Kokonoe-machi: TNS-VS-456742; Kusu-machi: TNS-VS-778632, TNS-VS-779206, TNS-VS-779207, TNS-VS-779208, YMG 0079606, KYO 00010055; Hita-gun, Maetsue-mura: YMG 0126506; Kamitsue-mura: TNS-VS-456738, YMG 0079605; Amagase-machi: TNS-VS-456737, TNS-VS-456744, TNS-VS-779212; Shimoge-gun, Yabakei-machi: TNS-VS-456736; Yamakuni-machi: TNS-VS-456752.

Miyazaki Pref. Kobayashi-shi: TNS-VS-1031988, TNS-VS-1032023; Ebino-shi: TNS-VS-521725, TNS-VS-521777, TNS-VS-521778, TNS-VS-521785, TNS-VS-762705, KYO 00010217; Minaminaka-gun, Kitago-cho: TNS-VS-521721; Kitamorokata-gun, Yamanokuchi-cho: KYO 00010171; Nishimorokata-gun, Suki-son: TNS-VS-521780; Koyu-gun, Kijo-son: TNS-VS-521727; Higashiusuki-gun, Saigo-son: TNS-VS-793458; Morotsuka-son: TNS-VS-521722; Shiiba-son: TNS-VS-521781; Nishiusuki-gun, Takachiho-cho: TNS-VS-459236, TNS-VS-521717, TNS-VS-793460, KYO 00010145; Hinokage-cho: TNS-VS-521779, TNS-VS-793459.

Kagoshima Pref. Kagoshima-shi: TNS-VS-778959; Kanoya-shi: TNS-VS-453622; Izumi-shi: TNS-VS-463092; Okuchi-shi: TNS-VS-762587, TNS-VS-777635, TNS-VS-778950; Kokubu-shi: TNS-VS-453625; Tarumizu-shi: TNS-VS-453611; Satsumasendai-shi: TNS-VS-771413; Kawanabe-gun, Chiran-cho: TNS-VS-9516574, TNS-VS-9516587; Satsuma-gun, Satsuma-cho: TNS-VS-453782; Aira-gun, Mizobe-cho: TNS-VS-1032011; Yokogawa-cho: KYO 00010195; Makizono-cho: TNS-VS-1032008, KYO 00010216, KYO 00010190; So-gun, Kihoku-cho:

TNS-VS-453610; Ariake-cho: TNS-VS-453787; Kimotsuki-gun, Uchinoura-cho: TNS-VS-453606, TNS-VS-1031921; Koyama-cho: TNS-VS-453591; Onejime-cho: TNS-VS-453605.

Vandenboschia × *quelpaertensis* (Nakai) Ebihara (Fig. 10)

Chiba Pref. Kamogawa-shi: TNS-VS-540084, TNS-VS-724690, TNS-VS-793471; Kimitsu-shi: TNS-VS-540082, TNS-VS-802952, TNS-VS-927455; Awa-gun, Maruyama-machi: TNS-VS-540083; Wada-machi: TNS-VS-540112, TNS-VS-724691; Amatsukominato-machi: TNS-VS-1406, TNS-VS-71593, TNS-VS-107105, TNS-VS-254504, TNS-VS-256654, TNS-VS-540085, TNS-VS-604413, TNS-VS-690436, TNS-VS-724694, TNS-VS-802851, TNS-VS-802953, TNS-VS-803033, TNS-VS-803035, TNS-VS-803036, TNS-VS-803037, TNS-VS-803039, TNS-VS-803040, TNS-VS-803041, TNS-VS-927251, TNS-VS-927253, TNS-VS-802852a/b.

Tokyo Pref. Ome-shi: TNS-VS-803016; Oshima Isl./Oshima-machi: TNS-VS-647321, TNS-VS-803026; Toshima Isl./Toshima-mura: TNS-VS-459314; Kozu Isl./Kozushima-mura: TNS-VS-802847, TNS-VS-802849; Miyake Isl./Miyake-mura: TNS-VS-43235, TNS-VS-51481, TNS-VS-83866, TNS-VS-88952, TNS-VS-88953, TNS-VS-459311, TNS-VS-803023, TNS-VS-803024, TNS-VS-803025; Mikura Isl./Mikurajima-mura: TNS-VS-121028, TNS-VS-144379, TNS-VS-647390, TNS-VS-802947, TNS-VS-802955, TNS-VS-802958, TNS-VS-802959, TNS-VS-803018, TNS-VS-803019, TNS-VS-803021, TNS-VS-803022, TNS-VS-1031991; Hachijo Isl./Hachijo-machi: TNS-VS-54857, TNS-VS-81228, TNS-VS-81229, TNS-VS-121027, TNS-VS-181331, TNS-VS-369874, TNS-VS-370361, TNS-VS-390724, TNS-VS-459315, TNS-VS-747050, TNS-VS-775464, TNS-VS-802844, TNS-VS-802948, TNS-VS-802949, TNS-VS-802950, TNS-VS-802960, TNS-VS-802961, TNS-VS-802962, TNS-VS-802963, TNS-VS-802965, TNS-VS-802966, TNS-VS-802967, TNS-VS-802968, TNS-VS-803015, TNS-VS-803044, TNS-VS-803045, TNS-VS-803046, TNS-VS-803047, TNS-VS-803048, TNS-VS-803049, TNS-VS-803050, TNS-VS-803051, TNS-VS-803052, TNS-VS-803053, TNS-VS-803054, TNS-VS-803055, TNS-VS-803056, TNS-VS-803057, TNS-VS-803058, TNS-VS-803059, TNS-VS-803060; Aogashima Isl./Aogashima-mura: TNS-VS-137186, TNS-VS-369693; Chichijima Isl./Ogasawara-mura: TNS-VS-266465; TNS-VS-266466; Hahajima Isl./Ogasawara-mura: TNS-VS-290706, TNS-VS-523870, TNS-VS-778663, TNS-VS-802885, TNS-VS-802886, TNS-VS-802887, TNS-VS-803032.

Kanagawa Pref. Zushi-shi: TNS-VS-779080; Miura-gun, Hayama-machi: TNS-VS-142426; Ashigarakami-gun,

Yamakita-machi: TNS-VS-561715, TNS-VS-9516537; Ashigarashimo-gun, Yugawara-machi: TNS-VS-561707.

Fukui Pref. Oi-gun, Takahama-cho: TNS-VS-793465.

Gifu Pref. Yamagata-gun, Miyama-cho: TNS-VS-802918.

Shizuoka Pref. Hamamatsu-shi: TNS-VS-925901, TNS-VS-925902; Numazu-shi: TNS-VS-449843, TNS-VS-536235; Atami-shi: TNS-VS-449831, TNS-VS-536187; Ito-shi: TNS-VS-536236, TNS-VS-536237, TNS-VS-557306, TNS-VS-802988, TNS-VS-802989, TNS-VS-802990, TNS-VS-802991, TNS-VS-802993, TNS-VS-802994, TNS-VS-802995, TNS-VS-802996, TNS-VS-802997, TNS-VS-802998, TNS-VS-802999, TNS-VS-803000, TNS-VS-803001, TNS-VS-803005, TNS-VS-925917, TNS-VS-925918, TNS-VS-1032032; Fuji-shi: TNS-VS-449825, TNS-VS-793456; Kakegawa-shi: TNS-VS-252868, TNS-VS-449810, TNS-VS-536192, TNS-VS-536204, TNS-VS-925907, TNS-VS-1031891, TNS-VS-1031993; Fujieda-shi: TNS-VS-536195; Tenryu-shi: TNS-VS-449824, TNS-VS-536197, TNS-VS-536199, TNS-VS-542744, TNS-VS-925896, TNS-VS-925899, TNS-VS-925900; Shimodashi: TNS-VS-778644; Susono-shi: TNS-VS-946593; Kamo-gun, Higashiizu-cho: TNS-VS-449836, TNS-VS-536181, TNS-VS-802871, TNS-VS-802872, OSA 00207881; Kawazu-cho: TNS-VS-142061, TNS-VS-288448, TNS-VS-312905, TNS-VS-323272, TNS-VS-332534, TNS-VS-536188, TNS-VS-650035, TNS-VS-802922, TNS-VS-803010, TNS-VS-803011, TNS-VS-803012, TNS-VS-1031907, TNS-VS-9512582; Matsuzaki-cho: TNS-VS-288490, TNS-VS-536224, TNS-VS-449817, TNS-VS-536227, TNS-VS-925909; Nishiizu-cho: TNS-VS-286887, TNS-VS-331680, TNS-VS-332540, TNS-VS-449815, TNS-VS-778643, TNS-VS-778647, TAI 106818; Kamo-mura: TNS-VS-155909, TNS-VS-156526, TNS-VS-449819, TNS-VS-449842, TNS-VS-531376, TNS-VS-536226, TNS-VS-802870; Tagata-gun, Heda-mura: TNS-VS-210669, TNS-VS-449834, TNS-VS-449841, TNS-VS-536186, TNS-VS-939979; Nirayama-cho: TNS-VS-449844; Amagi-yugashima-cho: TNS-VS-449818, TNS-VS-564258, TNS-VS-802873, TNS-VS-802874, TNS-VS-802878, TNS-VS-802879, TNS-VS-803002, TNS-VS-803003, TNS-VS-925906; Nakaizu-cho: TNS-VS-566223, TNS-VS-773768, TNS-VS-965065, TNS-VS-1031964, TNS-VS-1031983, TNS-VS-1032001, KYO 00010451; Fuji-gun, Shibakawa-cho: TNS-VS-793457; Ogasa-gun, Ogasa-cho: TNS-VS-545458; Daito-cho: TNS-VS-44338, TNS-VS-536193; Shuchi-gun, Haruno-cho: TNS-VS-536184; Iwata-gun, Toyoka-mura: TNS-VS-449812, TNS-VS-536200, TNS-VS-925898; Sakuma-cho: TNS-VS-288445, TNS-VS-449828, TNS-VS-536228, TNS-VS-802908, TNS-VS-802917, TNS-VS-1031901, TNS-VS-1032044; Misakubo-cho: TNS-VS-

- 802881; Inasa-gun, Mikkabi-cho: TNS-VS-925914.
- Aichi Pref.** Okazaki-shi: TNS-VS-463610; Toyohashi-shi: TNS-VS-9516623; Kasugai-shi: TNS-VS-95166276.
- Mie Pref.** Ise-shi: TNS-VS-378982, TNS-VS-1031984; Matsusaka-shi: TNS-VS-537920; Owase-shi: TNS-VS-537836, TNS-VS-130364, TNS-VS-144738, TNS-VS-793438, TNS-VS-802919, TNS-VS-802921, TNS-VS-1031903, TNS-VS-1031912, TNS-VS-1031948, TNS-VS-1032035, MBK 0030322, OSA s.n. (K. Seto 4229); Kumano-shi: TNS-VS-537842, TNS-VS-802860a/b, TNS-VS-1031995, TNS-VS-1032018, TNS-VS-1032019; Hisai-shi: TNS-VS-537914; Kuwana-gun, Tado-cho: TNS-VS-803008, TNS-VS-941848; Ichishi-gun, Ichishi-cho: TNS-VS-537912; Iinan-gun, Iitaka-cho: YMG 0039310; Taki-gun, Seiwa-mura: OSA 00005006; Miyagawa-mura: OSA 00100402; Watarai-gun, Nansei-cho: KYO 00010249; Nanto-cho: TNS-VS-537918; Omiya-cho: TNS-VS-537910; Kisei-cho: TNS-VS-537845; Kitamuro-gun, Kiinagashima-cho: TNS-VS-537835; Minamimuro-gun, Mihama-cho: TNS-VS-537911; Kiho-cho: TNS-VS-464084, TNS-VS-778925, TNS-VS-779032, TNS-VS-9508433.
- Shiga Pref.** Ika-gun, Kinomoto-cho: TNS-VS-802888, TNS-VS-802889.
- Kyoto Pref.** Otokuni-gun, Kasa-gun, Oe-cho: TNS-VS-194842, KYO 00010382, KYO 00010383.
- Osaka Pref.** Izumi-shi: TNS-VS-726370; Sennan-gun: TNS-VS-1032002.
- Hyogo Pref.** Tsuna-gun, Tsuna-cho: TNS-VS-554754.
- Nara Pref.** Gose-shi: TNS-VS-937972; Uda-gun, Muro-mura: KYO 00010368; Yoshino-gun, Nishiyoshino-mura: TNS-VS-583710.
- Wakayama Pref.** Hashimoto-shi: TNS-VS-937954, TNS-VS-937971; Shingu-shi: TNS-VS-779045, TNS-VS-9508434; Kaise-gun, Shimotsu-cho: OSA 00131640; Misato-cho: OSA 00005007, OSA 00026888; Arita-gun, Kanaya-cho: TNS-VS-937956, OSA 00131648; Hidaka-gun, Kawabe-cho: TNS-VS-937961; Nakatsu-mura: TNS-VS-937962; Nishimuro-gun, Shirahama-cho: TNS-VS-37588, TNS-VS-775469, TNS-VS-802931, TNS-VS-802932, TNS-VS-802933, TNS-VS-802934, TNS-VS-802935, TNS-VS-802936, TNS-VS-802942, TNS-VS-802944, TNS-VS-802945, TNS-VS-802946, TNS-VS-937944; Nakahechi-cho: TNS-VS-937939, OSA 00034222, OSA 00131659; Oto-mura: OSA s.n. (K. Seto 13165), OSA 00131668, OSA 00131674; Hikigawa-cho: TNS-VS-937973; Susami-cho: TNS-VS-937948, OSA 00052415, OSA 00131680, OSA 00131681, OSA 00131682, OSA 00131685, OSA 00152821; Kushimoto-cho: TNS-VS-937953; Higashimuro-gun, Nachikatsuura-cho: TNS-VS-937949; Taiji-cho: KYO 00010254; Koza-cho: TNS-VS-692575, TNS-VS-802920; Kozagawa-cho: TNS-VS-937946, TNS-VS-937951, TNS-VS-937952, TNS-VS-1031998, KYO 00010358, OSA 00077294; Kumano-gawa-cho: TNS-VS-937942, TNS-VS-937943.
- Tottori Pref.** Iwami-gun, Iwami-cho: TNS-VS-452716.
- Shimane Pref.** Hirata-shi: TNS-VS-9516600; Kanoashi-gun, Tsuwano-cho: YMG 0034347.
- Hiroshima Pref.** Hiroshima-shi: TNS-VS-1032048; Saeki-gun, Yuki-cho: TNS-VS-793391.
- Yamaguchi Pref.** Yamaguchi-shi: TNS-VS-50514, TNS-VS-275998, YMG 0079579, YMG 0086023; Tokuyama-shi: YMG 0126470; Iwakuni-shi: YMG 0077214, YMG 0076017; Yanai-shi: TNS-VS-793476; Mine-shi: YMG 0126482; Shinnanyo-shi: TNS-VS-793454; Kugagun, Nishiki-cho: YMG 0079585, YMG 0126466; Miwa-cho: YMG 0079577; Tsuno-gun, Kano-cho: YMG 0079584, YMG 0079582; Saba-gun, Tokuji-cho: YMG 0126468; Toyora-gun, Toyota-cho: YMG 0075601, YMG 0017098, YMG 0016162, YMG 0126476, YMG 0126478, YMG 0126480; Mine-gun, Shuho-cho: TNS-VS-275999, YMG 0045852, YMG 0126481; Otsu-gun, Misumi-cho: YMG 0126469; Yuya-cho: YMG 0079590; Abu-gun, Kawakami-son: TNS-VS-793462; Ato-cho: TNS-VS-50513, YMG 0019801.
- Tokushima Pref.** Tokushima-shi: TNS-VS-50516, KYO 00010476; Anan-shi: TNS-VS-9516608; Kaifu-gun, Kainan-cho: TNS-VS-779173, TNS-VS-779190, TNS-VS-1032034, TNS-VS-1032049, OSA s.n. (K. Seto 12060); Shishikui-cho: TNS-VS-1031892, TNS-VS-1032037, TNS-VS-9516542, TNS-VS-9516620; Miyoshi-gun, Ikawa-cho: TNS-VS-1032038.
- Ehime Pref.** Niihama-shi: OSA 00005011; Ozu-shi: TNS-VS-525393; Uma-gun, Shingu-mura: TNS-VS-793451; Shuso-gun, Tanbara-cho: TNS-VS-793473; Nishiuwa-gun, Honai-cho: YMG 0074574; Higashiuwagun, Nomura-cho: KYO 00010479, KYO 00010480; Kitauwa-gun, Tsushima-cho: YMG 0074573, OSA 00005010; Minamiuwa-gun, Johen-cho: TNS-VS-35819; Ipponmatsu-cho: KYO 00010522.
- Kochi Pref.** Muroto-shi: TNS-VS-460838, TNS-VS-553409, TNS-VS-1032027, MBK 0046361; Aki-shi: TNS-VS-553407; Sukumo-shi: TNS-VS-460839; TNS-VS-553181, TNS-VS-779162; Tosashimizu-shi: TNS-VS-553180, TNS-VS-553419, TNS-VS-647391, TNS-VS-771529, TNS-VS-779174, TNS-VS-803013, TNS-VS-803014, TNS-VS-1031906, TNS-VS-1032015, TNS-VS-1032030, TNS-VS-1032031, TNS-VS-1032033; Aki-gun, Toyo-cho: TNS-VS-128039, TNS-VS-779166, TNS-VS-1031902, MBK 0049946; Yasuda-cho: TNS-VS-553410; Kitagawa-mura: OSA 00212426; Umaji-mura: TNS-VS-462524; Kami-gun, Monobe-son: TNS-VS-1031911, MBK 0027859; Nagaoka-gun, Otoyo-cho: TNS-VS-1032026, KYO 00010468; Takaoka-gun, Ochi-cho: TNS-VS-318479, TNS-VS-1031893, YMG 0081109; Higashitsuno-

- mura: TNS-VS-553427; Hayama-mura: TNS-VS-553428.
- Fukuoka Pref.** Kitakyuushuu-shi: TNS-VS-463650, TNS-VS-590387; Fukuoka-shi: TNS-VS-590378, TNS-VS-590386; Kurume-shi: TNS-VS-590383, TNS-VS-1031960; Yamada-shi: TNS-VS-463649; Chikushi-gun, Nakagawa-machi: TNS-VS-590376, TNS-VS-590382; TNS-VS-778630, TNS-VS-778638, OSA 00003151; Kasuya-gun, Hisayama-machi: TNS-VS-590385; Kaho-gun, Kaho-machi: TNS-VS-590384; Chikuhomachi: YMG 0036457; Tagawa-gun, Soedamachi: TNS-VS-590398.
- Saga Pref.** Taku-shi: TNS-VS-272798; Imari-shi: TNS-VS-536398, TNS-VS-941840; Takeo-shi: TNS-VS-536400; Kashima-shi: TNS-VS-536407; Saga-gun, Yamato-cho: TNS-VS-536410; Ogi-gun, Ogi-machi: TNS-VS-536413; Higashimatsuura-gun, Kitahata-mura: TNS-VS-536405, TNS-VS-778626, TNS-VS-778627; Nishimatsuura-gun: TNS-VS-1031887.
- Nagasaki Pref.** Nagasaki-shi: TNS-VS-793405, TNS-VS-793406, TNS-VS-793407; Shimabara-shi: TNS-VS-50517; Isahaya-shi: TNS-VS-480532, TNS-VS-793411; Omura-shi: TNS-VS-793409, TNS-VS-941849; Minamitakaki-gun, Mizuho-cho: TNS-VS-793412; Minamimatsuura-gun, Arikawa-cho: TNS-VS-793403; Iki Isl./Iki-gun, Gonora-cho: TNS-VS-1031896.
- Kumamoto Pref.** Hitoyoshi-shi: TNS-VS-35816, TNS-VS-455159; Minamata-shi: TNS-VS-802909, TNS-VS-802910, TNS-VS-802911; Hondo-shi: OSA 00005014; Yamaga-shi: YMG 0081110; Amakusa-shi: TNS-VS-762650; Shimomashiki-gun, Chuo-son: TNS-VS-455302; Tomochi-machi: TNS-VS-455301; Kamotogun, Kikuka-machi: TNS-VS-465094; Kamimashiki-gun, Mifune-machi: TNS-VS-455304; Yatsushiro-gun, Sakamoto-mura: TNS-VS-293595, TNS-VS-455291, TNS-VS-455295, KYO 00010512; Miyahara-machi: TNS-VS-455294; Toyo-mura: TNS-VS-112589, KYO 00010509; Izumi-mura: TNS-VS-455299; Ashikita-gun, Ashikita-machi: TNS-VS-455290; Kuma-gun, Nishiki-machi: TNS-VS-455283; Okaharu-mura: TNS-VS-465095; Sue-mura: TNS-VS-455284; Kuma-mura: TNS-VS-455289, KYO 00010125; Amakusa-gun, Ariake-machi: TNS-VS-455288; Kuratake-machi: KYO 00010154; Sumoto-machi: TNS-VS-455157; Amakusamachi: TNS-VS-778337, OSA 00005013.
- Oita Pref.** Oita-shi: TNS-VS-456741; Saiki-shi: TNS-VS-456733, TNS-VS-456746; Bungotakada-shi: TNS-VS-456751; Oita-gun, Shonai-cho: TNS-VS-456747; Shimoge-gun, Yabakei-machi: KYO 00010133, KYO 00010134; Usa-gun, Ajimu-machi: TNS-VS-456756.
- Miyazaki Pref.** Miyazaki-shi: TNS-VS-521775, TNS-VS-521783, TNS-VS-802928; Miyakonojo-shi: TNS-VS-521736, TNS-VS-802843, KYO 00010521; Nobeokashi: TNS-VS-521728; Nichinan-shi: TNS-VS-83858, TNS-VS-83861, TNS-VS-83864, TNS-VS-378984, TNS-VS-378985, TNS-VS-521726, TNS-VS-521718, TNS-VS-521735, TNS-VS-700553, TNS-VS-784659, TNS-VS-784672, TNS-VS-1031985, TNS-VS-1032010, TNS-VS-1032014, TNS-VS-9518557; Kobayashi-shi: TNS-VS-521723; Kushima-shi: TNS-VS-521782; Saito-shi: TNS-VS-521729, KYO 00010127; Ebino-shi: KYO 00010158; Miyazaki-gun, Tano-cho: TNS-VS-521737; Minaminaka-gun, Kitago-cho: TNS-VS-762768; Kitamorokata-gun, Yamanokuchi-cho: RYU 38174; Nishimorokata-gun, Takaharu-cho: TNS-VS-521784; Nojiri-cho: TNS-VS-521724; Higashimorokata-gun, Takaoka-cho: TNS-VS-521733; Aya-cho: TNS-VS-521730, KYO 00010056; Koyu-gun, Kijicho: TNS-VS-521740; Higashiusuki-gun, Togocho: TNS-VS-521741; Shiiba-son: TNS-VS-776801; Nishiusuki-gun, Takachiho-cho: KYO 00010163.
- Kagoshima Pref.** Kagoshima-shi: TNS-VS-775465, TNS-VS-925913, TNS-VS-1032005, TNS-VS-1032007; Sendai-shi: TNS-VS-463089; Kanoya-shi: TNS-VS-453786, TNS-VS-1031915; Okuchi-shi: TNS-VS-453617, TNS-VS-762585, TNS-VS-762586, TNS-VS-777321, TNS-VS-778963, TNS-VS-802925, KYO 00010504; Ibusuki-shi: TNS-VS-453619; Kokubu-shi: KYO 00010489; Tarumizu-shi: TNS-VS-305445, TNS-VS-802902, TNS-VS-802903, TNS-VS-802924, TNS-VS-1032036, KYO 00010526; Kagoshima-gun, Yoshida-cho: TNS-VS-453598; Mishima-mura: KYO 00010528; Ibusuki-gun, Kiire-cho: TNS-VS-453620; Kaimon-cho: TNS-VS-710349, YMG 0031221; Kawanabe-gun, Chiran-cho: TNS-VS-453600, TNS-VS-453615, TNS-VS-9516570, TNS-VS-9516572, TNS-VS-9516573, TNS-VS-9516576; Satsuma-gun, Iriki-cho: TNS-VS-463090, KYO 00010501; Miyanojo-cho: TNS-VS-539621, TNS-VS-802884, TNS-VS-1031987, TNS-VS-1031996; Tsuruda-cho: TNS-VS-777370, TNS-VS-777621, TNS-VS-802892, TNS-VS-802893, TNS-VS-802894, TNS-VS-802900, TNS-VS-802901; Kedocho: TNS-VS-463088; KYO 00010505; Shimokoshiki Isl./Shimokoshiki-son: TNS-VS-453589, TNS-VS-453792, TNS-VS-802891, TNS-VS-803075; Satsuma-cho: TNS-VS-777032; Aira-gun, Kajiki-cho: TNS-VS-1031972, TNS-VS-1032012; Aira-cho: TNS-VS-453602, TNS-VS-1031914, TNS-VS-1031958, TNS-VS-1031989, KYO 00010194, KYO 00010503; Kamo-cho: KYO 00010497; Mizobecho: TNS-VS-453789, KYO 00010197; Yokogawa-cho: TNS-VS-453781, KYO 00010498; Makizonocho: KYO 00010507; So-gun, Sueyoshi-cho: TNS-VS-453608; Shibushi-cho: TNS-VS-453607; Ariake-cho: TNS-VS-453609; Kimotsuki-gun, Uchinoura-cho: TNS-VS-453590, TNS-VS-802880, TNS-VS-802898, TNS-VS-1032040, TNS-VS-1032041, TNS-VS-1032043, KYO 00010508; Koyama-cho: YMG 0047317,

- KYO 00010161; Onejime-cho: OSA 00038194; Ne-jime-cho: TNS-VS-453623; Tashiro-cho: TNS-VS-144654, TNS-VS-262554, TNS-VS-632744, TNS-VS-925904, TNS-VS-1031889, TNS-VS-1031895, TNS-VS-1031965, RYU 33444; Sata-cho: TNS-VS-1031894, TNS-VS-1031899; Tanegashima Isl./Nishinoomote-shi: TNS-VS-155373, TNS-VS-453796, TNS-VS-507272, TNS-VS-507273, TNS-VS-507279, TNS-VS-507306, TNS-VS-507307, TNS-VS-507308, TNS-VS-507310, TNS-VS-507311, TNS-VS-507313, TNS-VS-507314, TNS-VS-507315, TNS-VS-507316, TNS-VS-507317, TNS-VS-507318, TNS-VS-514282, TNS-VS-514283, TNS-VS-514284, TNS-VS-514285, TNS-VS-514286, TNS-VS-745194, TNS-VS-9519978; KAG s.n. (Teruya 300); Tanegashima Isl./Kumage-gun, Nakatane-cho: TNS-VS-507280, TNS-VS-507309, TNS-VS-507312, TNS-VS-507319, TNS-VS-508399, TNS-VS-784874; Tanegashima Isl./Minamitan-cho: TNS-VS-453587, TNS-VS-453795, TNS-VS-507274, TNS-VS-507275, TNS-VS-507276, TNS-VS-507277, TNS-VS-507278, TNS-VS-507305, TNS-VS-507401, TNS-VS-507535, TNS-VS-507536; Yaku Isl./Kamiyaku-cho: TNS-VS-321833, TNS-VS-453592, TNS-VS-453593, TNS-VS-453627, TNS-VS-763169, TNS-VS-802853, TNS-VS-802854, TNS-VS-802856, TNS-VS-802857, TNS-VS-802857, TNS-VS-802858, TNS-VS-802869, TNS-VS-1031900, TNS-VS-1031994; Yaku Isl./Yaku-cho: TNS-VS-453595, TNS-VS-453601, TNS-VS-778947, TNS-VS-802859, TNS-VS-802897, TNS-VS-1032047; Naze-shi: TNS-VS-1031990; Izumi-shi: TNS-VS-323310, TNS-VS-453586, TNS-VS-455026, TNS-VS-463091, TNS-VS-777401, TNS-VS-802914, TNS-VS-802915, TNS-VS-802927, TNS-VS-927456, TNS-VS-927458; Amami-oshima Isl./Amami-shi: TNS-VS-764148; Amami-oshima Isl./Oshima-gun, Yamato-son: KYO 00010013; Amami-oshima Isl./Uken-son: TNS-VS-311712, TNS-VS-1031968, TNS-VS-1031979; Amami-oshima Isl./Setouchi-cho: YMG 0045350; Amami-oshima Isl./Sumiyo-son: TNS-VS-311709, TNS-VS-311710, TNS-VS-311711, KYO 00010321; Amami-oshima Isl./China-cho: TNS-VS-1031970.
- Okinawa Pref.** Nago-shi: TNS-VS-778922, TNS-VS-778923, TNS-VS-778924, TNS-VS-936778, TNS-VS-1031976; Kunigami-gun, Kunigami-son: TNS-VS-296993, TNS-VS-316755, TNS-VS-317901, TNS-VS-369076, TNS-VS-369704, TNS-VS-369878, TNS-VS-394800, TNS-VS-750475RYU 32779; Onna-son: TNS-VS-518028; Ishigaki Isl./Ishigaki-shi: KYO 00010308, KYO 00010312; Uotsuri Isl./Ishigaki-shi: TNS-VS-395413, RYU 33641; Yaeyama-gun, Taketomi-cho: TNS-VS-561859, TNS-VS-778361, TNS-VS-936779, RYU 32895, KAG s.n. (S. Hatusima 23197), KYO 00010337, OSA 00010647, OSA 00040253.
- Vandenboschia birmanica* (Bedd.) Ching \times *V. nipponica* (Nakai) Ebihara (Fig. 11)
- Chiba Pref.** Kimitsu-shi: TNS-VS-724689, TNS-VS-724692, TNS-VS-779084, TNS-VS-802951, TNS-VS-927520, TNS-VS-1031954, TNS-VS-1032025.
- Kanagawa Pref.** Yokohama-shi: TNS-VS-779087.
- Vandenboschia birmanica* (Bedd.) Ching \times *V. kalamocarpa* (Hayata) Ebihara \times *V. nipponica* (Nakai) Ebihara (Fig. 12)
- Chiba Pref.** Awa-gun, Wada-machi: TNS-VS-724693; Amatsukominato-machi: TNS-VS-779074, TNS-VS-779082.
- Tokyo Pref.** Aogashima Isl./Aogashima-mura: TNS-VS-779088, TNS-VS-803027, TNS-VS-803028, TNS-VS-803029, TNS-VS-803030, TNS-VS-803031.
- Kanagawa Pref.** Yokosuka-shi: TNS-VS-779235; Yokosuka-shi/Kamakura-shi: TNS-VS-779241, TNS-VS-779242, TNS-VS-779243, TNS-VS-561706, TNS-VS-779227, TNS-VS-779228, TNS-VS-779229, TNS-VS-779230, TNS-VS-779237, TNS-VS-779238, TNS-VS-779239; Kamakura-shi: TNS-VS-779240; Fujisawa-shi: TNS-VS-779086; Zushi-shi: TNS-VS-35962, TNS-VS-83863, TNS-VS-83865, TNS-VS-184003, TNS-VS-200153, TNS-VS-305012, TNS-VS-628017, TNS-VS-779076, TNS-VS-779077, TNS-VS-779078, TNS-VS-779091, TNS-VS-802865, TNS-VS-802866, TNS-VS-802867, TNS-VS-802868, TNS-VS-802976, TNS-VS-802977, TNS-VS-802978, TNS-VS-802980, TNS-VS-802981, TNS-VS-802983, TNS-VS-803404, TNS-VS-1031904, TNS-VS-1031986, TNS-VS-1032016, TNS-VS-1032020, TNS-VS-1032024, TNS-VS-9516536.
- Shizuoka Pref.** Shimoda-shi: TNS-VS-775471, TNS-VS-778641; Tagata-gun, Nakaizu-cho: TNS-VS-778651.
- Tottori Pref.** Tohaku-gun, Yurihama-cho: TNS-VS-778652, TNS-VS-778657.