How can China curb biological invasions to meet Kunming-Montreal Target 6?

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To meet Kunming-Montreal Target 6 of the Convention on Biological Diversity (CBD), we argue that more comprehensive measures are needed to manage invasive alien species (IAS), which is especially true for China, given that it is undergoing an unprecedented wave of invasions due to its rapid development. Here, we consider the status of IAS in China, evaluate China's ongoing countermeasures against IAS, and provide recommendations for improving management. In total, 802 IAS have been identified in China. Facing the growing threats of IAS, China has made progress in IAS management, but more stringent and thorough measures are still required. In addition to improving legislation and governance, China should strengthen transdisciplinary and proactive research, implement more comprehensive prevention and control actions against IAS, and enhance international cooperation and translational education. By creating a model for IAS management that other countries can follow, China's efforts can contribute substantially to the CBD's Kunming-Montreal 2030 Global Targets.

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A defining feature of the Anthropocene is that human-mediated invasions of alien species are increasingly threatening biodiversity, economies, and public health worldwide (Pyšek and Richardson 2010; Pyšek *et al.* 2020). According to the latest assessment report on invasive alien species (IAS) published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), there are over 37,000 established alien species around the world, of which more than 3500 are invasive (Roy *et al.* 2024). Over the past five decades, the total global cost of IAS has reached nearly US$1.3 trillion (Diagne *et al.* 2021), with an annual cost of US$423 billion in 2019 (Roy *et al.* 2024). IAS have also generated a biodiversity crisis across the planet, as they are thought to have contributed to ~60% of recorded global species extinctions (Roy *et al.* 2024). Moreover, a number of human/livestock infections (eg COVID-19, monkeypox, swine fever) are closely linked with IAS (Pyšek and Richardson 2010; Bertelsmeier and Ollier 2020; Dellicour *et al.* 2020). Following Aichi Target 9 (prevention and control of IAS), the Convention on Biological Diversity (CBD) has set a new target (Kunming-Montreal Target 6, agreed to in 2022) aiming, by 2030, to reduce the rates of introduction and establishment of IAS by at least 50% and eradicate or control IAS in priority sites (UNEP 2022a). More stringent management of IAS is thus required, especially in China, a country undergoing an unprecedented wave of invasions due to its rapid economic development (Wu 2023).

China has the world's oldest uninterrupted civilization, with documented introductions of alien species extending back to the 2nd century BCE (Xu and Qiang 2018). As a "mega-biodiversity" country with a vast territory (~9.6 million km^2 of land area), China has extremely diverse habitats and climates that can accommodate species from almost all of the world's biomes, and consequently many alien species have become invasive after their introduction into the country. At present, China is one of the most heavily IAS-infested countries (Wu 2023; Zhao 2024), with resultant economic losses amounting to US$117.3 billion annually in the agricultural sector

In a nutshell:

- Kunming-Montreal Target 6 of the Convention on Biological Diversity (CBD) has set a new target to manage invasive alien species (IAS) worldwide by 2030
- China is among the countries experiencing the most harm from IAS, the resolution of which has global implications
- Although China has made progress in IAS management, stricter and more comprehensive measures are still needed
- Advancement of IAS management will depend on upgrading policies and governance, developing invasion science, increasing public awareness, and implementing coordinated actions both domestically and internationally

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alone, the highest ranking worldwide (Paini *et al.* 2016). In addition, IAS are a critical threat to native biodiversity, leading to a large-scale degradation of ecosystems and hampering China's implementation of Kunming-Montreal Target 6. Thus, IAS-associated impacts have recently been raised by China's top leadership in reference to maintaining holistic national security, which corresponds to the country's ecological safety and food security (Cao 2021; Qiu and Hu 2021; Wu 2023).

Reducing the rates of introduction and establishment of IAS in China is key to achieve Kunming-Montreal Target 6 worldwide, given China's large territory, high potential for IAS, and increasing interactions with other countries, including the "Belt and Road" (B&R) Initiative to which 152 countries/regions have joined as of November 2023 (Su 2023). To assess the potential for meeting Kunming-Montreal Target 6, we analyze the current state of IAS in China, evaluate China's ongoing countermeasures against IAS, and provide recommendations for future IAS management. Given that China's experiences and challenges are not unique, we hope that the solutions proposed here can also provide insights into effective management for IAS in other countries toward achieving Kunming-Montreal Target 6.

Methods

By integrating various publications and databases, we compiled a novel and comprehensive IAS dataset for China, covering taxon, region of origin, introduction time and pathway, distribution, and major impacts (Ju *et al.* 2025). Following the framework of categorization for invasion-management topics as proposed in the book entitled *National Biosafety Science* (Wu 2023), we then identified five key issues: legislation and governance, transdisciplinary and proactive research, prevention and control actions, international cooperation, and translational education. Viewed as the five pillars for IAS management in China (Wu 2023), these key issues, albeit overlapping, were ranked according to a classical approach to invasion issues (Pyšek *et al.* 2020): that is, top-down (legislation and governance, international cooperation) or bottom-up (translational education) approaches coupled with evidence-based research (transdisciplinary and proactive research) and effective management activities (prevention and control actions). For each of the five issues, we synthesized existing progress, diagnosed deficiencies, and proposed a set of priorities for improving management. The deficiencies and priorities were based on collective review and debate among the authors of this article, along with consultation with six experts in our professional network, an approach similar to that of a Delphi-method procedure employed in recent horizon scans of invasion issues (Ricciardi *et al.* 2017). Priorities were assigned by primarily considering their universality, urgency, and/or novelty; they are not presented in rank order mostly because of a need to act in synergy but also because our goal is to encourage further scrutiny, debate, and supplementation that can spur the development of new policies to improve IAS management in China.

IAS status in China

We identified 802 IAS in China (Ju *et al.* 2025). This is a much higher number of IAS than was included in the official report (~660 IAS; MEE 2020), which overlooked ~150 newly emerging invasive plants (Zhao 2024). Our dataset reveals that most IAS in China are invasive plants and invertebrates (Figure 1a). Human activities are the primary introduction pathway (Figure 1c), with North America, Europe, and Asia being the predominant regions of origin (Figure 1b). Since the end of World War II in the mid-1940s, 377 IAS have been introduced into China, with 61% of them being newly introduced after the country's reform and opening-up in 1978 (Figure 1d). IAS occur in all provinces, but their numbers are higher in the country's eastern and southern regions (Figure 1e). These invaders have had a considerable impact on China's biodiversity, agricultural and forestry production, and public health (see Appendix S1: Panel S1 for more details; Ju *et al.* 2025).

As identified in our dataset, the total number of IAS in China appears to be lower than that in other countries with similar areal extents and biomes (eg 4186 IAS have been identified in the US; Simpson *et al.* 2022), but we consider that the number of identified IAS in China is an underestimate, given that data for birds, reptiles, amphibians, and fish are very limited (Appendix S1: Panel S1; Figure 1a). A new nationwide IAS inventory has been underway since 2022, which should yield comprehensive data in the coming years (Huo 2022). However, such inventories need to be continuously updated because there is no sign that IAS prevalence in China will decline (Liu *et al.* 2024). In our dataset, the number of IAS in China reflects an unprecedented invasion wave since 1978, with an average increase of 5–6 introduced species per year (Figure 1d). Moreover, as the world's second largest economy, China exchanges large quantities of goods with other countries, suggesting the future risk of exposure in China to potential IAS is high (Liu *et al.* 2024); most provinces are likely to accommodate additional IAS (Wan *et al.* 2017). Tourism can also increase IAS, as the numbers of travelers to and from China are both rapidly increasing (eg 145.3 million and 154.6 million, respectively, in 2019 before the COVID-19 pandemic; MCT 2020). Models predict that, in agroecosystems alone, an additional 66–90 newly emerging IAS are likely to enter China in the next 30 years (Wu 2023).

Evaluation of current actions

Legislation and governance

Comprehensive legislation is a critical precondition for effective IAS management. Globally, although 80% of countries have targets to reduce IAS, only 17%, including China, have national legislation related to IAS prevention or control in general (Roy *et al.* 2024). China has 26 laws and regulations

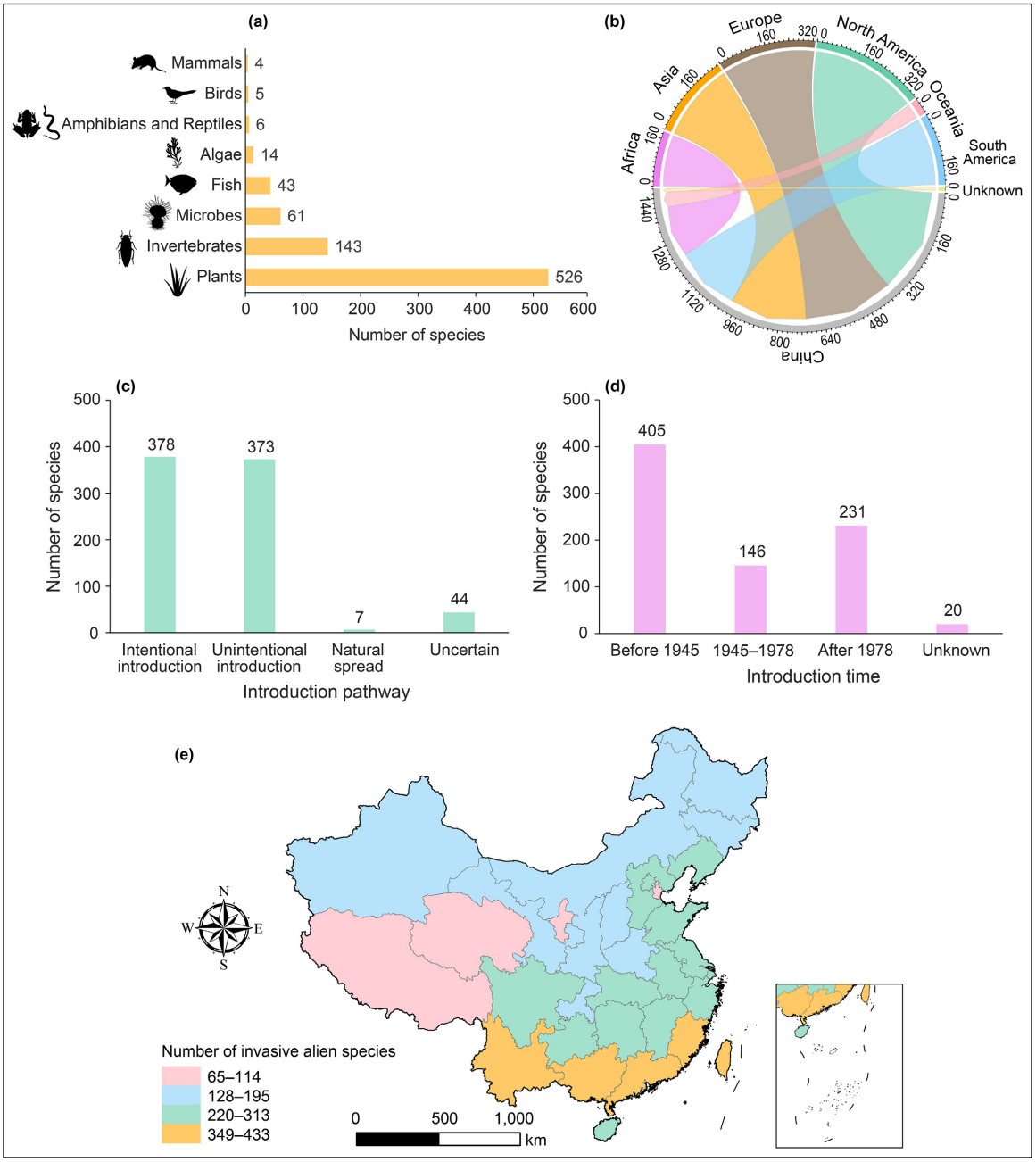

Figure 1. The number/taxon (a), region of origin (b), introduction pathway (c), time since introduction (d), and provincial distribution (e) of invasive alien species (IAS) in China. In (b), colors indicate the continental origins (native ranges) of species introduced into China. The greatest width of a given chord within the upper semicircle represents the number of species originating per continent (including unknown), and the number outside the perimeter of the lower semicircle displays the cumulative value of the frequency of species introduced from all continents (note that some species have multiple origins). In (c), intentional introduction includes pathways of release in nature and escape from confinement, unintentional introduction involves transport of contaminants or stowaways, and natural spread refers to species dispersal through interconnected corridors or other unaided pathways (Scalera *et al.* 2016). The map in panel (e) includes mainland China and nearby islands. Animal and plant silhouettes in (a) courtesy of PhyloPic (www.phylopic.org/images, CC0 1.0 Universal).

involving some form of IAS management (Appendix S1: Table S1), with the *Biosecurity Law* enacted in 2020 being the most relevant. The *Biosecurity Law* is the cornerstone of China's biosafety/biosecurity management and encompasses a broad range of biosecurity issues; however, there remains considerable room for improvement with respect to IAS management (Appendix S1: Table S2). One shortcoming of the *Biosecurity Law* is that it lacks a clear definition of IAS; moreover, it addresses only those IAS that pose threats to biodiversity (Article 60), thereby ignoring IAS that imperil human livelihoods and that have non-biodiversity-related environmental impacts (NPC 2020). Although the *Biosecurity Law* emphasizes the risks associated with infectious disease and epidemics in animals and plants

(Articles 27–33), it does not address invasion issues. To implement the *Biosecurity Law*, China announced the *Administration Measures of IAS* in 2022 (MARA 2022). However, the *Administration Measures* also have limitations (Appendix S1: Table S2); in particular, the *Measures* largely overlook the risk of new pathways that could facilitate IAS introduction/spread (UNEP 2022b). Moreover, although IAS can interact with other drivers of global change (eg climate change, land-use change, resource exploitation, and environmental pollution) (UNEP 2022b), the *Administration Measures* fail to develop IAS management within a framework of these interactions. Furthermore, both the *Biosecurity Law* and the *Administration Measures* are poorly understood by the public, potentially impeding their effective implementation and enforcement (Wu 2023).

Effectively managing IAS relies on a sound administrative structure. In China, responsibility for IAS management is separately shouldered by six ministerial departments, each of which specializes in one of the following areas: agriculture, oceans, forestry and grasslands, eco-environments, urban–rural development, and customs (Appendix S1: Table S3). Although China is working to improve the collective response to IAS by increasing interministerial coordination (SCIO 2021), cross-management and communication among governmental departments currently appears to be inadequate due to the partitioning of responsibilities. Moreover, while the central government has mandated province-based governance models in IAS responses, socioeconomic conditions—and consequently the effectiveness of IAS management—vary substantially among the provinces (Wan *et al.* 2017; Wu 2023).

Transdisciplinary and proactive research

Improving IAS management requires extensive evidence-based research. Since the 1990s, China has made great strides in invasion science. Due to higher levels of government funding for research, China's scholarly output on IAS-related issues has surged to the third-highest global position in terms of the number of English-language publications produced, trailing only the US and Australia (Wu 2023). Related achievements offer valuable scientific/technological guidance for IAS management (Wan *et al.* 2017; Liu *et al.* 2024). However, tackling future challenges and exploiting opportunities in invasion science (Ricciardi *et al.* 2017) will require filling information gaps for numerous issues (eg invasion prediction; multidimensional invasion mechanisms and impacts; development of novel tools for IAS detection, monitoring, source tracing, and control) (Liu *et al.* 2022). In addition, China largely lacks the trained sociologists and economists needed to reinforce invasion-science advances to provide a more holistic picture for addressing invasion issues (Schlesinger 2010; Schwartz *et al.* 2017; Wu 2023). Furthermore, professional scientific training in IAS-related issues is inadequate due to the relatively recent development of invasion science in the country (Wan *et al.* 2017; Wu 2023). Amidst the escalating threats from IAS, China requires a massive increase in capacity, not only in the number of researchers but also in the number of government agency professionals (at local and national levels) who have ecological training (see Appendix S1: Table S4 for more details).

Prevention and control actions

Preventing the arrival of IAS and ensuring effective detection and control after introduction are the core tasks for achieving Kunming-Montreal Target 6. In response to the requirements of IAS management presented in the "Beautiful China" Initiative proposed by the central government (CPCCCSC 2023), China is currently preparing a "4E" Action Plan (Panel 1); however, implementation of this plan still faces challenges. Of the identified 802 IAS, only 59 are listed as key IAS under state supervision (Ju *et al.* 2025) due to budget constraints and insufficient understanding of other species (Wu 2023). In addition, China's standardized system for IAS management is far from complete. Although 78 national/industrial technical standards for IAS have been developed over the past 5 years (Appendix S1: Table S5), these standards predominantly focus on IAS in agricultural and forestry sectors and concentrate on detection, while those for monitoring and control remain inadequate (Fu *et al.* 2022). Furthermore, the implementation and enforcement of standards is

Panel 1. The "4E" Action Plan for IAS management in China

Biological invasions follow a sequence of ecological stages—introduction, colonization, latency, and spread (Sakai *et al.* 2001; Walther *et al.* 2009)—and management strategies differ for each stage. To effectively respond to invasive alien species (IAS), the "4E" Action Plan is proposed as a framework for national action and includes four sub-plans, each corresponding to stage-specific management—E1: early warning and prevention, E2: early monitoring and rapid detection, E3: early eradication and blocking, and E4: entire mitigation (Wu 2023). The E1 sub-plan includes intelligent data prediction, quantitative risk analysis, colonization evaluation, and early dispersion prediction. The E2 sub-plan involves multimodal data and consequently molecular identification and detection, image diagnosis, remote monitoring, and tracking. The E3 sub-plan involves early elimination, gallery interception, ecological barrier building, and source control before spread. The E4 sub-plan aims to mitigate losses in heavily infested areas using integrated-control tools. The longer the time since introduction, the higher the cost of IAS management (Simberloff *et al.* 2013); as such, E1 is the priority response, E2 and E3 are implemented if E1 fails, and E4 is the final and most expensive option.

Figure 2. Examples of projects on the control and eradication of invasive alien species in China. Site locations denoted by red circles in inset maps. (a) Removal of common water hyacinth *Eichhornia crassipes* in Shanghai (image credit: Yucheng Lyu). (b) Precise chemical control of fire ant *Solenopsis invicta* in Sichuan (image credit: Zhendong Song). (c) Biocontrol of ragweed *Ambrosia artemisiifolia* with leaf beetles in Guangxi (image credit: Zhongshi Zhou). (d) Removal of cordgrass *Spartina alterniflora* along the eastern coast (image credit: Hanzhong Liu).

sporadic—most standards are voluntary, and often lack sufficient public acceptance, hence posing challenges for consistent practical application. In addition, some of the standards are themselves controversial due to their relative ineffectiveness or lack of operability (Fu *et al.* 2022). Regarding risk analysis, just 100 IAS in China have been assessed for different ecosystems (Wu 2023), representing a mere fraction of the total number of IAS according to our dataset (Ju *et al.* 2025), and most of these assessments failed to follow internationally recognized procedures and standards (UNEP 2022b). In terms of control/eradication, while several projects for serious invasive species are being implemented (eg for common water hyacinth [*Eichhornia crassipes*], fire ant [*Solenopsis invicta*], and ragweed [*Ambrosia artemisiifolia*]; Figure 2, a–c), these projects are generally local in scale; the sole exception is a national-scale project to control cordgrass (*Spartina alterniflora*; Figure 2d), the goal of which is to eradicate 90% of this invader along the Pacific coast by 2025 (Stokstad 2023). Given the widespread prevalence of IAS in the country, current projects are insufficient for effectively mitigating the impacts of invasions nationwide despite these efforts.

International cooperation

International cooperation is the only way to build a "global biosecurity community with a shared future" (SCIO 2021). Worldwide, the capacity for addressing IAS-related issues differs among countries, and in many developing countries the negative impacts associated with IAS are unlikely to be alleviated soon (UNEP 2022b). To achieve Aichi Target 9, China has made great efforts in cooperating with other countries (Wan *et al.* 2017). For instance, China has hosted the International Conference on Biological Invasions—a platform for developing multinational cooperation to address cross-border IAS management—on three separate occasions (Wu 2023). Through participation in joint scientific/technological projects, China has intensified collaborative research on IAS with the US, Australia, Germany, Denmark, and Italy over the past decades (Wan *et al.* 2017). Although these efforts have supported capacity building against IAS (eg IAS identification, detection, and monitoring; risk analysis; biological control; and professional training; Wu 2023), still greater international cooperation will be needed to address escalating invasion threats and achieve future policy goals.

Translational education

Preventing and controlling IAS requires community-level participation; therefore, translational education is essential (Schlesinger 2010; Briske 2012; Chapin 2017). To create a bottom-up culture in support of efforts to combat IAS, China is strengthening public engagement in IAS management (Wu 2023). However, public awareness programs specifically targeting IAS-related issues remain scarce in China. Although the central government introduced a specific program, *I'm a Contributor to the Beautiful China: Action Plan to Raise Public Awareness of Ecological Conservation (2021–2025)*, to encourage public engagement in conservation (SCIO 2021), it does not emphasize IAS-related issues. Despite the severity of IAS, China has yet to establish a comprehensive translational education system on IAS that aligns with the Kunming-Montreal framework (UNEP 2022a). "Translational scientists"—those who translate scientific insights into tangible enhancements of public welfare (Briske 2012)—are pivotal in bridging the gaps between research achievements and practical actions for IAS management. However, given their current underappreciation in China, these scientists are unable play their proper role in IAS-related ecological education (Ju *et al.* 2020).

Recommendations for improving management

Given the increasing risks associated with IAS, we predict that China will experience intense biosecurity and sustainability pressures. Current measures, however, are insufficient to alleviate IAS threats, and more stringent and thorough measures are needed. To improve IAS management in China, we propose the following recommendations.

First, China's IAS legislation and governance require improvement. The *Biosecurity Law* needs to explicitly define IAS and consolidate relevant articles into a unified chapter to address all IAS relating to human, animal, and plant health, as well as environmental concerns. Similarly, the *Administration Measures* should be updated to include consideration of risks of new pathways for species' introduction and spread (eg domestic e-commerce, interbasin water transfer, and transnational/transregional infrastructure construction) and integrate other global change drivers (eg land use, climate change, resource exploitation, and environmental pollution) into IAS management (UNEP 2022b). Moreover, improved public awareness of relevant IAS regulations is needed for the effective implementation and enforcement thereof (Wu 2023). For governance, we recommend supplementing the National Health Commission into the current interministerial coordination panel and enhancing the panel's mandates under the National Security Commission to oversee all IAS-associated affairs. This panel can use a range of administrative tools (eg financial support, performance evaluations, and executive directive) to coordinate responsibilities among central departments, and between the central and local governments. In particular, the panel requires seamless funding between fiscal cycles for ongoing work, and emergency funds to respond to emerging IAS (Appendix S1: Table S2).

Second, more transdisciplinary and proactive research is needed to support effective IAS management in China. We recommend developing the integrated framework of metacoupling (ie human–nature interactions within as well as between adjacent and distant places; Liu 2023) through a holistic lens to understand IAS in China, as well as in other countries with IAS that can spread to China (Liu *et al.* 2013). Applications of the framework, combined with a platform for sharing big data (see section below), can reveal hidden ecosystem vulnerabilities to IAS, identify stakeholder roles (eg policymakers, regulators, traders, and the public) in various aspects of IAS, and predict IAS spread/impacts across different ecosystems and regions. Such applications are most effective in generating useful knowledge for IAS management when ecologists closely collaborate with sociologists and stakeholders/policymakers (Vaz *et al.* 2017). In addition, China needs to substantially increase capacity building and establish a national "facilitated network" (ie a collaborative network that extends the capacity of isolated research groups; Measey *et al.* 2019) to jointly address key scientific/technological issues to facilitate the growth of invasion science and improve policymaking and practical actions against IAS (see section below). Equally important are the needs to increase the number of trained professionals to expand IAS-related research and implementation, and to enhance evidence collation to improve the effectiveness of IAS management actions (Sutherland 2022). The national IAS expert committee should be expanded to include public health, social, and economic scientists as well as ecologists, which would facilitate the development of transdisciplinary approaches (Grünhagen *et al.* 2023) for policymaking and scheme implementation (see Appendix S1: Table S4).

Third, comprehensive implementation of the "4E" Action Plan is required to augment IAS prevention and control. To enhance the effectiveness of further actions, we propose the following recommendations: (1) comprehensively analyze IAS data from our newly compiled dataset (Ju *et al.* 2025) and the most recent nationwide inventories, and update the list of IAS requiring state supervision accordingly through internationally recognized processes, such as the Environmental Impact Classification for Alien Taxa (EICAT) and Socioeconomic Impact Classification of Alien Taxa (SEICAT) (Bacher *et al.* 2018; Kumschick *et al.* 2024); (2) improve the IAS big-data-sharing platform in collaboration with global data aggregators (eg Global Register of Introduced and Invasive Species, and CABI) to facilitate EICAT/SEICAT and enable horizon scanning of potential new IAS in China (UNEP 2022b); (3) provide mandatory standards for monitoring, control, and/or ecological restoration for each IAS under state supervision, and increase implementation and enforcement of actions; (4) construct a

national IAS surveillance and monitoring network covering all county units, and enhance applications of emerging technologies (eg DNA fingerprinting, environmental DNA, artificial intelligence, remote sensing, 5G mobile network+, and internet of things) and citizen-science tools (ie engage volunteers in information collection; Silvertown 2009) to increase the capability for dynamic monitoring and source tracing of key IAS; (5) implement more large-scale control, eradication, and restoration projects that target the more severe invaders, particularly in important agricultural areas (eg northern China and the northeast plains, and the middle–lower Yangtze plains; Lu *et al.* 2015; Zhou *et al.* 2024), biodiversity hotspots (eg Yunnan, Hainan, and Sichuan; MEE 2015), and protected areas (Ren *et al.* 2021; UNEP 2022b). By relying on precise target control, these projects may implement sustainable measures (eg cultivation of resistant varieties, trapping and mechanical removals, environmentally friendly chemicals, and biological control) and link with government performance appraisals to improve effectiveness.

Fourth, to combat IAS, China must promote multilateralism and engage in greater international cooperation. Referencing the COP-16 decision (UNEP 2024), China may collaborate with the selected subregional technical and scientific support centers of the CBD, as well as with other organizations (eg International Plant Protection Convention, International Union for Conservation of Nature, World Health Organization, and World Organisation for Animal Health) to develop more adaptive methods, tools, and strategies against IAS. Considering that the ongoing B&R Initiative likely increases the translocation of IAS among participating countries, China should form a multilateral alliance for IAS management with B&R countries. Under the framework of South–South Cooperation, China is required to build a facilitated union with emerging developing economies (eg BRICS, African Union, Association of Southeast Asian Nations) to collectively deal with IAS (Measey *et al.* 2019). Related countries may be committed to building cross-country networks for IAS monitoring and prevention (eg exchanging IAS datasets, and conducting increased monitoring in transboundary regions adjacent to China; Zhang *et al.* 2024), control and eradication, and collation of evidence of effective action, as well as for collaborative research, policy consultation, and personnel training. Once established, such networks can help meet future policy demands that can enhance the capacity to manage IAS both in China and globally.

Finally, an in-depth redesign of education related to IAS issues is required in China. This includes an increase in the number of "translational scientists" (Ju *et al.* 2020) who can raise public awareness of IAS in various dimensions, including helping citizens identify and report IAS, better understand relevant legislation, appreciate the importance of native species, and know various measures to mitigate IAS. Translational education may be mandatory for policymakers, and the knowledge obtained from research needs to be quickly translated into the decision making of managers and the implementation of actions. In addition, modes of translational education for IAS-related issues may be more diversified (eg broadening publicity channels, engaging in debate, and inviting public participation in policymaking and strategic development). In this way, an effective translational education system involving

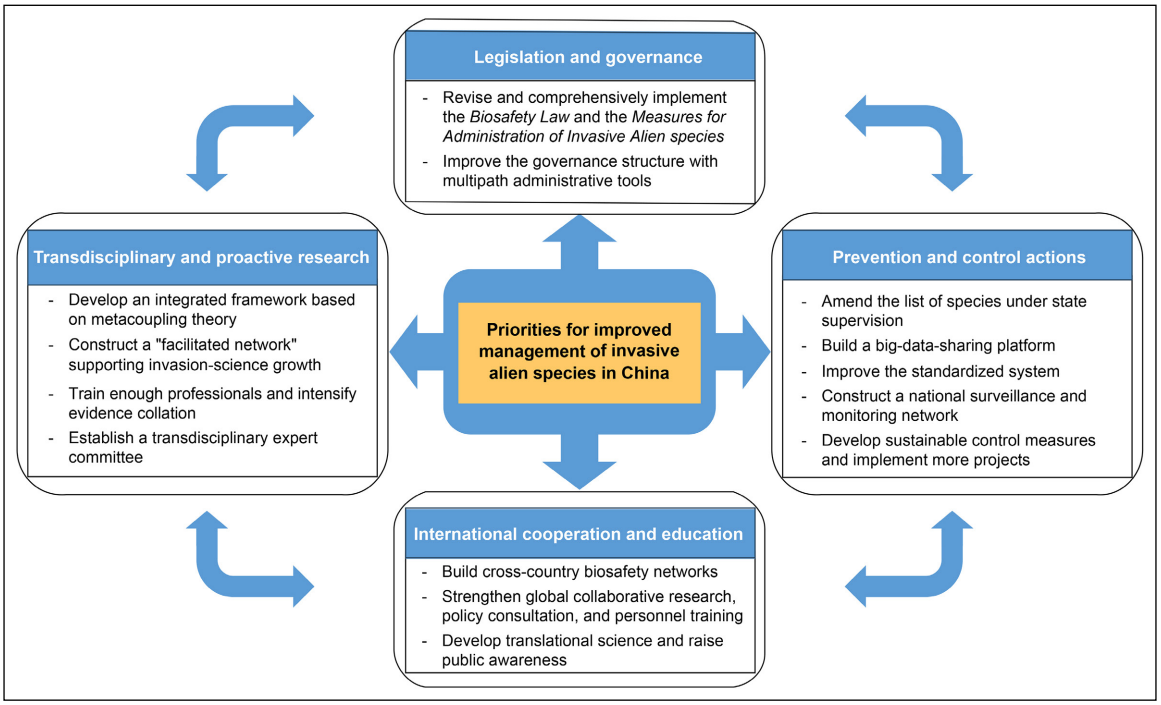

Figure 3. Proposed priorities for the improved management of invasive alien species in China. Priorities of each issue are assigned based on their universality, urgency, and novelty. These priorities are not presented in hierarchical order because they must be conducted simultaneously and may be subject to further scrutiny, debate, and enhancement.

government guidance and extensive public participation can be developed to help prevent and control IAS and improve services for all stakeholders.

Conclusions

Rapid development and intensive globalization have already resulted in the introduction, establishment, and spread of IAS in China, with negative, far-reaching impacts (Wu 2023; Ju *et al.* 2025). Although progress has been made, stricter and more comprehensive measures are needed if the Kunming-Montreal Target 6 is to be achieved (UNEP 2022a,b). In addition to strengthening legislation and capacity building, China needs to improve its governance structure, undertake more transdisciplinary and proactive research, and develop comprehensive surveillance and monitoring systems, as well as employ integrated technologies, to prevent and control IAS. Moreover, greater international cooperation and knowledge translation are also necessary (Figure 3). Because China is among the countries suffering most from IAS, China's battle against IAS is essential for global biodiversity conservation and sustainability. By creating an integrated model for IAS management that other countries can follow, China's efforts can contribute substantially to the Kunming-Montreal 2030 Global Targets of the CBD.

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Data Availability Statement

Data (Ju *et al.* 2025) are available on Dryad at https://doi.org/10.5061/dryad.b5mkkwhnh.

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Supporting Information

Additional material can be found online at http://onlinelibrary.wiley.com/doi/10.1002/fee.2853/suppinfo

Appendix S1

Supplement to:

How can China curb biological invasions to meet Kunming-Montreal Target 6?

R-T Ju *et al.*

Published in *Frontiers in Ecology and the Environment*

R-T Ju *et al.* – Supporting Information

Panel S1. Status of invasive alien species (IAS) in China

In our novel dataset (Ju *et al*. 2025), invasive plants account for the largest proportion (65.6%), followed by invertebrates (17.8%), microbes (7.6%), fish (5.4%), and other taxa (3.6% in total) (Figure 1a). The ranking correlates closely with the level of attention each taxon receives in China (Weber and Li 2008; Wan *et al*. 2017; Du *et al*. 2023; Wu 2023). It suggests that, while no IAS should be overlooked, invasive plants and invertebrates particularly warrant intensified management efforts. The 802 IAS originated from all six continents, with North America (378 species), Europe (327 species), and Asia (278 species) being the primary origins (some species have multiple origins; Figure 1b). The result indicates that trade and tourism with neighboring countries and developed continents have significantly facilitated the entry of IAS into China, highlighting the necessity for robust international cooperation against IAS for China (Wan *et al*. 2017; Zhang *et al*. 2024). In terms of introduction pathways (Figure 1c), less than 1% of IAS entered China through natural spread (ie through interconnected corridors or other unaided ways), while 47.1% of species (especially plants and fish) were intentionally introduced through release in nature or escape from confinement (eg used for landscape/horticulture, agriculture, medicines, erosion control, pet/aquarium/terrarium culture, and aquaculture/mariculture; Wan *et al*. 2017), and 46.5% of species (especially insects and pathogens) were unintentionally introduced through transport contaminants or stowaways (ie through various vectors including plants, animals, timbers, packing materials, conveyances, and other means; Wan *et al*. 2017). In addition, for 5.5% of IAS in China, their introduction pathways are unidentifiable. Interestingly, of the 378 IAS intentionally introduced to China, 63.8% were introduced prior to 1945. This result indicates a historical inclination toward the introduction of alien species to meet the demands of agriculture, forestry, and aquaculture in China (Weber and Li 2008). Furthermore, when considering all introduction types, nearly half of IAS (377 species) IAS were newly introduced after the end of World War II, especially over the past four decades, 231 IAS have newly emerged in China following the country's reform and opening-up in 1978, with an average increase of 5–6 species per year (Figure 1d). The rapid increase of IAS over the past four decades, markedly exceeding the historical average (fewer than one species introduced per year since records commenced in the 2nd century BCE; Xu and Qiang 2018), substantiates the claim that China is facing an unprecedented wave of introduction and invasions due to its rapid economic development (Wu 2023). The 802 IAS have spread throughout the country, with the eastern and southern provinces experiencing more severe invasions (Figure 1e), resulting in substantial detriments to agriculture, forestry, public health and biodiversity (Ju *et al*. 2025).

Although the total number of IAS appears to be lower in China than in other counties with similar areas and biomes (eg 4,186 IAS have been identified in the US; Simpson *et al*. 2022), we consider the number in China has undoubtedly been underestimated, with the complete species list still needing to be compiled. For example, for some important taxonomic taxa, particularly mammals, birds, amphibians and reptiles (Figure 1a), data on IAS are very limited due to less attention or the lack of appropriate monitoring procedures in China (Wu 2023), even or the different criteria for identifying IAS. In addition, data biases also exist in terms of data availability associated with IAS living in water bodies (especially fish; Ju *et al*. 2020). Du *et al*. (2023) reported that with the rise of wildlife and pet trading and introduction for aquaculture, at least 1,000 alien vertebrate species (including fish, amphibians, reptiles, birds, and mammals) have been released in China, yet their invasion state is mostly unclear. The invasion of alien

vertebrates has been one of the major causes of global biodiversity loss (Roy *et al*. 2024). In China, although several amphibians and reptiles (eg *Lithobates catesbeianus* and *Trachemys scripta elegans* spreading widely in the Yangtze basin and the southeastern provinces) and some fish species (eg *Clarias* spp invading lakes in Yunnan Plateau, and *Atractosteus spatula* establishing in rivers of southern provinces) have received high attention due to their perceptible impacts on native aquatic fauna (Ju *et al*. 2020; Liu *et al*. 2024), the threat to biodiversity and human health from invasive birds and mammals still does not receive their deserved attention. However, a few invasive birds (eg *Aplonis panayensis* and *Cacacatua sulpurea*) and mammals (eg *Mus musculus*, *Ondatra zibethicus*, and *Rattus rattus*) are increasingly spreading in China, and have resulted in serious impacts on indigenous species and ecosystems in many regions (eg in Xinjiang, Tibet, Yunnan, and Taiwan; Du *et al*. 2023).

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Table S1. Major laws and administrative regulations concerning the management of invasive alien species in China. PRC: the People's Republic of China. NPC: the National People's Congress of PRC. SC: the State Council of PRC. For each legal document, the first promulgating year and the newest amending year are shown in parentheses.

#	Name (year)	Authority	Data sources
1	Criminal Law of PRC (1979, 2020)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE3OTZhNjM2YTAxNzk4MjJhMTk2NDBjOTI%3D
2	Marine Environment Protection Law of PRC (1982, 2017)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY4NzgxZDBhYWY%3D
3	Forestry Law of PRC (1984, 2019)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3MWU5ZTE4MTAxNzI3ZTU1NDM2MjdmNTI%3D
4	Grassland Law of PRC (1985, 2021)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE3YWIyMmI4YTAxN2FiZDVhZDI4NjA1N2E%3D
5	Frontier Health and Quarantine Law of PRC (1986, 2018)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY4YTVjOTBiNjM%3D
6	Fisheries Law of PRC (1986, 2013)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3NmExMTA3MDM%3D
7	Customs Law of PRC (1987, 2021)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE3YWIyMmI4YTAxN2FiZDcxOWUwZjA1YzA%3D
8	Law of PRC on the Protection of Wildlife (1988, 2018)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYxY2NlYTE0YjExNDM%3D
9	Environmental Protection Law of PRC (1989, 2014)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3NmMxZDA3MTc%3D
10	Law of PRC on Import and Export Commodity Inspection (1989, 2021)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE3YWIyMmI4YTAxN2FiZDdkY2FhZDA1ZWU%3D
11	Law of PRC on the Entry and Exit Animal and Plant Quarantine (1991, 2009)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY2YWIzNjA0ZTc%3D
12	Agriculture Law of PRC (1993, 2012)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3NGUxMTA2YmQ%3D
13	Foreign Trade Law of PRC (1994, 2016)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY4MmQ2MjA5NWI%3D
14	Law of PRC on Animal Epidemic Prevention (1997, 2021)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NzAzYWRkMjAxNzczNzM5NWE5NzNlMzE%3D

15	Seed Law of PRC (2000, 2021)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE3ZjA3MmEyZTAxN2YwYjY2ZmI2NDAxNjY%3D
16	Animal Husbandry Law of PRC (2005, 2015)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3YzcyYzA4MWI%3D
17	Exit and Entry Administration Law of PRC (2012)	NPC	https://flk.npc.gov.cn/detail2.html?MmM5MDlmZGQ2NzhiZjE3OTAxNjc4YmY3M2ViZDA2NGY%3D
18	Biosecurity Law of PRC (2020)	NPC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NTI2NWRkNDAxNzUzZmFjYjEyYTEyNWQ%3D
19	Regulations on Plant Quarantine (1983, 2017)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MGU0MDA0YjA5NzM%3D
20	Regulations of PRC on Forest Pest Control (1989)	SC	http://www.gov.cn/zhengce/2020-12/25/content_5574239.htm
21	Regulations for the Implementation of the Law of PRC on the Entry and Exit Animal and Plant Quarantine (1996)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MDg2YWZhZTAzYzE%3D
22	Regulation on Administration of the Import and Export of Goods (2001)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNlOThiZDAxNmY0MWYwZmE5ZDAyMDE%3D
23	Regulations on Administration of Agricultural Genetically Modified Organisms Safety (2001, 2017)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTIzNDhhYjE5NWU%3D
24	Regulations for the Implementation of the Law of PRC on Import and Export Commodity Inspection (2005, 2022)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgxODE4MGUwYTYxMzAxODExZTQ4MDg1ZjFmZDU%3D
25	Regulation of PRC on the Administration of the Import and Export of Endangered Wild Fauna and Flora (2006, 2019)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTM1Zjg0NjFkM2E%3D
26	Regulations for the Implementation of the Protection of Terrestrial Wildlife (1992, 2016)	SC	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MGUxNDU2MDA4ZTg%3D

Table S2. Potential deficiencies and recommendations for improvement in the *Biosecurity Law* and the *Administration Measures of Invasive Alien Species*.

Policy document	Potential deficiencies	Recommendations for improvement
Biosecurity Law	Article 15 mentions that timely biosecurity risk investigation and assessment must be conducted in the event of new or sudden human infectious diseases and animal/plant epidemics, but this does not involve IAS.	Incorporating the IAS event into the scope of biosecurity risk investigation and assessment, as it is among the main issues of biosecurity in China.
	Article 16 vaguely mentions that a national biosecurity information platform must be established, but it does not specify which platforms should be established.	Detailing the construction of individual biosecurity information platforms tailored to address various biosecurity risk issues, including a specialized platform for IAS.
	Article 19 states that relevant departments must formulate and improve technical standards of biosecurity, but it does not emphasize how these standards should be applied.	Incorporating additional provisions enhancing the implementation and enforcement of technical standards for biosecurity management.
	Articles 27–33 provide provisions pertinent to the prevention and control of emerging infectious diseases and animal and plant epidemics. However, the provisions apply to organisms defined in Article 85, which are those that first appear or emerge suddenly on a large scale in China, posing a substantial threat to public health, livestock, poultry, and forestry and agricultural plants. Despite many of those organisms being of alien origin, they are not managed as IAS.	(1) Providing a complete definition for IAS in the *Law*. (2) Categorizing the native and alien-originated organisms of infectious diseases and animal and plant epidemics in Articles 27–33, with the alien ones being included in the management articles related to IAS. (3) Moving Article 60 to Articles 27–33, and merging provisions related to IAS in order to comprehensively address all risks of invasive alien organisms associated with human, animal, and plant health as well as environmental concerns.
	Article 60 underscores the management of human genetic and biological resources. It delineates the management for IAS with the following provisions: (1) The state must enhance its defenses	

	and responses against IAS to protect biodiversity. The Ministry of Agriculture and Rural Affairs, in collaboration with other relevant departments under the State Council, is tasked with establishing species registry and management protocols for IAS; (2) relevant departments under the State Council, according to their respective duties, must intensify their efforts in surveying, monitoring, early warning, controlling, assessing, and eradicating IAS, as well as restoring ecosystems affected by IAS; (3) unauthorized introduction, release, or disposal of alien species is strictly prohibited for any entities or individuals without prior approval. Collectively, these provisions lack comprehensive operational details. Furthermore, there is no definition for IAS in the *Law*, but it appears to only focus on those species with ecological impacts.	
	Article 68 provides provisions for the construction of national biosecurity infrastructure, emphasizing the need to expedite the establishment of strategic biosecurity resource platforms including bioinformatics platform, genetic repositories for humans and animals and plants, beneficial strain and viral libraries, and high-containment pathogen laboratories. However, there is no provision for the construction of IAS platform.	Enhancing this article by incorporating an IAS sample repository into the biosecurity infrastructure construction.
	Article 69 emphasizes the need to train biology professionals, yet it neglects the importance of fostering interdisciplinary talents for biosecurity management.	Adding provisions emphasizing the cultivation of talents in the interdisciplinary fields of biology, ecology, sociology, and economics.
	Article 70 provides provisions strengthening the reserves of materials for the prevention and control of major human	Adding provisions about the stockpiling of materials and equipment for the prevention and control of IAS.

	infectious diseases and animal and plant epidemics, but it does not mention those reserves for IAS management.	
Administration Measures of Invasive Alien Species	Article 1 states that the purpose of formulating the *Measures* is to prevent and control IAS and ensure the sustainable development of agriculture, forestry, animal husbandry, and fisheries, as well as protect biodiversity, but it overlooks the impact of IAS on human health.	Amending both articles to expand the scope of managed targets to include alien species that impact public health, in order to address all IAS related to the health of humans, animals, plants, and environmental concerns.
	Article 2 defines IAS as those that affect ecological environment and the sustainable development of agriculture, forestry, animal husbandry, and fisheries, as well as biodiversity, yet it neglects alien species that impact human health.	
	Articles 4 and 12–13 emphasize the supervision of channels for the introduction and spread of IAS, including imported goods, transport vehicles, postal items, travelers, transnational e-commerce, border trade among residents, and introduction for agriculture, forestry, and aquaculture, but fail to consider other important emerging pathways for IAS introduction and spread, such as domestic e-commerce, inter-basin water transfer, and cross-border infrastructure construction.	Supplementing other important new pathways for IAS introduction and spread especially domestic e-commerce, cross-basin water transfer, and transnational or transregional canal/railway/highway construction into the related articles (UNEP 2022).
	Article 5 emphasizes that the scope of local governments for IAS management include farmlands, forests, grasslands, wetlands, freshwater bodies, oceans, islands, nature reserves, areas alongside highways, urban green belts, and flower/seedling trading markets, but overlooks the supervision for areas alongside railways. Areas alongside railways are important habitats for IAS	Supplementing provisions about the oversight of IAS in areas alongside railways and the inclusion of the national railway management department and its branch agencies across the country into the responsible units for IAS management, to eliminate regulatory blind spots.

	spread in China, yet local governments lack regulatory authority over them.	
	Throughout the *Measures*, there is a notable absence of provisions on the development of IAS management linking to global change, even though IAS can interact with other global change drivers, such as climate change, land-use alterations, and environmental pollution, as highlighted by the UNEP (2022).	Adding provisions harmonizing land-use, climate and environmental management policies to develop IAS management in the context of global change (UNEP 2022).
	The *Measures* do not mention how to effectively manage IAS using administrative tools throughout the document.	Adding provisions for the application of administrative tools including financial support, performance evaluations, and executive orders to coordinate responsibilities among central departments and between central and local governments.

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Table S3. Major departments related to the management of invasive alien species in China.

Department	Responsibility	Data sources
Ministry of Agriculture and Rural Affairs (MARA)	Managing invasive alien species in agricultural ecosystems and inland aquafarms.	http://www.moa.gov.cn/
Ministry of Natural Resources (MNR)	Managing invasive alien species in marine ecosystems.	https://www.mnr.gov.cn/
Ministry of Ecology and Environment (MEE)	Coordinating and supervising the management of invasive alien species in natural ecosystems.	http://www.mee.gov.cn/
National Forestry and Grassland Administration (NFGA)	Managing invasive alien species in forest and wetland ecosystems.	http://www.forestry.gov.cn/
Ministry of Housing and Urban-Rural Development (MHURD)	Managing invasive alien species in urban green spaces.	https://www.mohurd.gov.cn/
General Administration of Customs (GAC)	Managing invasive alien species at ports of entry and exit.	http://www.customs.gov.cn/

Table S4. Potential deficiencies and recommendations for improvement of biological invasion research in China.

Subject	Potential deficiencies	Recommendations for improvement
Prediction and early warning	China lacks effective tools revealing the origins, spread paths, and dynamics of IAS that have the potential to enter the country.	Developing an integrated framework based the metacoupling theory (ie human-nature interactions within as well as between adjacent and distant places; Liu 2023) through a holistic lens to comprehend the spread of IAS in China and their native countries as well as other countries with IAS that can spread to China (Liu *et al*. 2013).
	The national platform for IAS early warning is unable to provide real-time, visual, and intelligent forecasting information (Wu 2023).	Building an IAS big-data-sharing platform with global data aggregators (eg Global Register of Introduced and Invasive Species and CABI) and developing visual and intelligent tools to provide precise, real-time forecast information for potential IAS in China (UNEP 2022).
Detection, monitoring, and source tracing	China's existing tools for IAS detection, monitoring lack automation, intellectualization, and high sensitivity, resulting in prolonged durations and high costs for target discovery.	Developing emerging tools (eg immune detection, rapid molecular group detection, DNA fingerprint, ultra-trace and environmental DNA detection, artificial intelligence, remote sensing, 5G mobile network+, and internet of things) to increase the capability for target discovery, dynamic monitoring and source tracing of key IAS in China (Wu 2023).
	For most IAS in China, their spread path is difficult to trace (Wu 2023).	
Eradication and control	The technical reserve for emergency response to potential IAS is inadequate in China that hinders the success of early interception and eradication (Ju *et al*. 2020).	Developing novel quarantine treatment technologies (eg environmentally friendly chemical fumigants, high/low temperature treatment, radiation exposure, and modified atmosphere treatment) and formulating emergency response plans to enhance the effectiveness of early interception and eradication of potential IAS (Wan *et al*. 2023).

	The innovation on the development of tools for sustainable control of IAS is sluggish in China, which affects the entire mitigation of existing IAS (Wan *et al*. 2017; Wu 2023).	Developing green control tools (eg resistant varieties and cultivation techniques, trapping removal, novel chemicals, male sterilization, gene drive control, and habitat restoration) to effectively mitigate serious invasion of existing IAS in China (Wan *et al*. 2017).
Invasion success mechanism and impacts	Current research in China for the explanation of mechanisms underlying invasion success mainly concentrates on the invasiveness of IAS but often overlooks invasibility of ecosystems (Liu *et al*. 2022).	Applying the metacoupling theory (Liu 2023) and multiple invasion hypotheses (Enders *et al*. 2020) to elucidate the mechanisms of invasion success, considering both changes in traits of IAS themselves and the vulnerability/resistance of recipient ecosystems (Richardson and Pyšek 2006).
	China's research on IAS effects mainly focuses on ecological or economic impacts, with less consideration of social and human health impacts (Wan *et al*. 2017).	Examining the comprehensive effects of key IAS in China, including economic, social, and human health impacts, particularly for the responses of multidimensional biodiversity and ecosystem multifunctionality to IAS (Liu *et al*. 2022).
	Most of the current studies on the mechanism and impact of biological invasions in China are focused on a single IAS on a local scale (Wan *et al*. 2017; Liu *et al*. 2022).	Advocating comparisons of multiple species on various spatial–temporal scales (Liu *et al*. 2022, 2024).
Capacity building	IAS research in China is typically led by a limited number of independent teams (usually <10 members per team), without an efficient collaborative network.	Building a national "facilitated network" (ie a collaborative network that extends the capacity of isolated research groups) to strengthen joint research on key scientific or technological issues related to IAS and facilitate the growth of invasion science (Measey *et al*. 2019; Ricciardi *et al*. 2017).

	The number of professionals related to IAS (each province usually does not exceed 10 professionals, so it is estimated that the total professional number nationwide is fewer than 400) is insufficient to meet current and future demands for the development of invasion science and biosecurity management in China (Wu 2023).	Training enough professionals who then take up IAS-related roles to promote policy improvement and effective implement; researchers must play a central role in fostering professionals, and the mission involves to train people in jobs now and train the next generations, through diverse ways such as postgraduate studies, residential courses, and short certificated courses (for existing officials).
	The capacity of evidence-based management for IAS prevention and control is insufficient in China (Li and Ma 2010; Tarkan *et al*. 2024).	Enhancing evidence-collation capacity to increase the effectiveness of actions for IAS management (Tarkan *et al*. 2024), in which the citizen science tool (ie the involvement of volunteers in research; Silvertown 2009) should be applied extensively (eg participating in surveillance and monitoring).
	The National IAS Expert Committee is currently only composed of 22 ecologists/agronomists but lacks experts from other fields (MARA 2021), making it difficult to provide interdisciplinary knowledge to improve IAS management.	Expanding the National IAS Expert Committee to include invasion ecologists, medical scientists, sociologists and economists to enhance policy improvement and scheme implementation.
		Developing a specific guideline/methodology to foster the application of interdisciplinary approaches (Grünhagen *et al*. 2023) in invasion management.

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Table S5. Technical standards related to invasive alien species in China between 2016 and 2020. NS: National standard. IS: Industry standard. Data source: http://std.samr.gov.cn/

#	Title	Code	Type	Grade
1	Detection and identification of *Narcissus* yellow stripe virus	GB/T 33035－2016	Detection	NS
2	Detection and identification of *Narcissus* late season yellows virus	GB/T 33115－2016	Detection	NS
3	Detection and identification of *Prunus* necrotic ringspot virus	GB/T 33114－2016	Detection	NS
4	Detection and identification of Pear blister canker viroid	GB/T 33120－2016	Detection	NS
5	Detection and identification of Sugarcane streak virus	GB/T 33127－2016	Detection	NS
6	Detection and identification of *Sclerophthora rayssiae* Kenneth, Kaltin et Wahl var. zeae Payaket Renfro	GB/T 33121－2016	Detection	NS
7	Detection and identification of *Melampsora larici-populina*	GB/T 33124－2016	Detection	NS
8	Detection and identification of *Eutypa lata* (Pers.) Tul. et C. Tul	GB/T 33119－2016	Detection	NS
9	Detection and identification of *Pseudomonas syringae* pv. Persicae	GB/T 33019－2016	Detection	NS
10	Detection and identification of *Helgardia herpotrichoides*	GB/T 33117－2016	Detection	NS
11	Detection and identification of Hosta virus X	GB/T 35330－2017	Detection	NS
12	Guidelines for surveillance of citrus Huanglongbing	GB/T 35333－2017	Detection	NS
13	Detection and identification of *Didymella lycopersici* Klebahn	GB/T 35331－2017	Detection	NS
14	Detection and identification of Apple fruit crinkle viroid	GB/T 35336－2017	Detection	NS

15	Detection and identification of *Cadophora gregata* (Allington & D.W.Chamb.) T.C. Harr. & McNew	GB/T 35338—2017	Detection	NS
16	Detection and identification of *Phytophthora medicaginis* E.M.Hans. Et D.P.Maxwell	GB/T 35329—2017	Detection	NS
17	Detection and identification of Maize chlorotic dwarf virus	GB/T 35271—2017	Detection	NS
18	Detection and identification of Grapevine virus A	GB/T 35332—2017	Detection	NS
19	Detection and identification of Grapevine yellow speckle viroid	GB/T 35337—2017	Detection	NS
20	Detection and identification of Cucumber green mottle mosaic virus	GB/T 35335—2017	Detection	NS
21	Guidelines for surveillance of citrus canker	GB/T 35272—2017	Detection	NS
22	Guidelines for surveillance of fusarium wilt of banana caused by *Fusarium oxysporum* f. sp. *cubense* (Smith) & Hansen Race 4	GB/T 35339—2017	Detection	NS
23	Detection and identification of Tomato mosaic virus	GB/T 36771—2018	Detection	NS
24	Detection and identification of Oat mosaic virus	GB/T 36778—2018	Detection	NS
25	Detection and identification of Potato virus Y	GB/T 36816—2018	Detection	NS
26	Detection and identification of Potato virus X	GB/T 36833—2018	Detection	NS
27	Detection and identification of Potato virus M	GB/T 36846—2018	Detection	NS
28	Detection and identification of Tomato severe leaf curl virus	GB/T 36850—2018	Detection	NS
29	Detection and identification of Tomato mosaic virus	GB/T 36771—2018	Detection	NS
30	Detection and identification of *Erwinia pyrifoliae*	GB/T 36852—2018	Detection	NS
31	Detection and identification of *Pseudomonas syringae* pv. *lachrymans*	GB/T 36853—2018	Detection	NS

32	Detection and identification of *Xanthomonas vesicatoria*	GB/T 36851—2018	Detection	NS
33	Detection and identification of Pepper mild mottle virus	GB/T 36780—2018	Detection	NS
34	Detection and identification of *Acidovorax cattleyae*	GB/T 36847—2018	Detection	NS
35	Detection and identification of *Spiroplasma citri* Saglio *et al*.	GB/T 36845—2018	Detection	NS
36	Detection and identification of *Pseudomonas syringae* pv.*maculicola* (McCulloch) Young *et al*.	GB/T 36844—2018	Detection	NS
37	Detection and identification of *Candidatus Phytoplasma pyri*	GB/T 36843—2018	Detection	NS
38	Detection and identification of *Clavibacter michiganensis* subsp. *nebruskensis*	GB/T 36840—2018	Detection	NS
39	Detection and identification of *Cronartium fusiforme* Hedgcock. Hunt ex Cummins	GB/T 36831—2018	Detection	NS
40	Detection and identification of *Mycosphaerella pini* E. Rostrup	GB/T 36824—2018	Detection	NS
41	Detection and identification of *Acidovorax citrulli*	GB/T 36822—2018	Detection	NS
42	Detection and identification of *Calonectria ilicicola* Boedijn & Reitsma	GB/T 36821—2018	Detection	NS
43	Detection and identification of *Gremmeniella abietina* (Lagerberg) Morelet	GB/T 36818—2018	Detection	NS
44	Detection and identification of *Diaporthe vaccinii* Shear	GB/T 36815—2018	Detection	NS
45	Detection and identification of *Fusarium oxysporum* (Schlecht.) f. sp. *fragariae* Winks & Willams	GB/T 36810—2018	Detection	NS
46	Detection and identification of *Moniliophthora perniciosa*	GB/T 36809—2018	Detection	NS
47	Detection and identification of *Xanthomonas cassavae* (ex Wiehe et Dowson) Vauterin *et al*.	GB/T 36808—2018	Detection	NS
48	Detection and identification of *Gymnosporangium clavipes* Cooke & Peck	GB/T 36801—2018	Detection	NS

49	Detection and identification of *Fusarium oxysporum* f. sp. *apii*	GB/T 36779—2018	Detection	NS
50	Detection and identification of *Pseudocercospora angolensis* Crous & U.Braun	GB/T 36775—2018	Detection	NS
51	Detection and identification of *Enterobacter cancerogenus* (Urosevi) Dickey et Zumof	GB/T 36807—2018	Detection	NS
52	Detection and identification of *Coleus blumei* viroids	GB/T 36849—2018	Detection	NS
53	Detection and identification of Sowbane mosaic virus	GB/T 36752—2018	Detection	NS
54	Detection and identification of Avocado sunblotch viroid	GB/T 36848—2018	Detection	NS
55	Detection and identification of Peach rosette mosaic virus	GB/T 36841—2018	Detection	NS
56	Detection and identification of Australian grapevine viroid	GB/T 36770—2018	Detection	NS
57	Guideline for surveillance of bean weevil	NY/T 3254—2018	Monitoring	IS
58	Code of practice for monitoring alien species—*Pistia stratiotes* L.	NY/T 3076—2017	Monitoring	IS
59	Guide of forest pests monitoring in ports	SN/T 4797—2017	Monitoring	IS
60	Code of practice for monitoring alien species—*Parthenium hysterophorus* L.	NY/T 3017—2016	Monitoring	IS
61	Technical guidelines for monitoring of *Lymantria dispar* Linnaeus with sex pheromone	SN/T 4720—2016	Monitoring	IS
62	Technical regulation for monitoring & forecasting pine caterpillars	LY/T 3030—2018	Monitoring	IS
63	Guidelines for surveillance of Japanese orange fly *Bactrocera* (*Tetradacus*) *tsuneonis* (Miyake)	NY/T 3155—2017	Monitoring	IS
64	Technical guidelines for monitoring exotic weeds	SN/T 4981—2017	Monitoring	IS
65	Technical guidelines for quarantine monitoring of *Leptinotarsa decemlineata* (Say)	SN/T 4984—2017	Monitoring	IS

66	Technical guidelines for biodiversity monitoring—aquatic vascular plants	HJ 710.12－2016	Monitoring	IS
67	Technical specification of safety assessment for alien herbaceous plants	NY/T 3669－2020	Assessment	IS
68	Methods of monitoring and assessment for grassland vegetation health	NY/T 3648－2020	Assessment	IS
69	Risk assessment guidelines of the pathogenic microorganism for inspection and quarantine laboratories	SN/T 4494－2016	Assessment	IS
70	Technical guidelines for eco-environmental health risk assessment—General principles	HJ 1111－2020	Assessment	IS
71	Guidelines for the pest risk analysis (PRA) in forestry	LY/T 2588－2016	Assessment	IS
72	Technical specification of replacement control for alien invasive plants	NY/T 3668－2020	Control	IS
73	Codes of practice for integrated management of *Cenchrus spinifex* Cav.	NY/T 3077－2017	Control	IS
74	Technical code of practice for integrated control of vegetable thrips pests	NY/T 3017－2016	Control	IS
75	Code of practice for integrated management of *Chromolaena odorata* (L.) R. M. King & H. Robinson	NY/T 3018－2016	Control	IS
76	Technical regulation of integrated management for *Hippota dorsalis* (Stal)	LY/T 3031－2018	Control	IS
77	Technical regulation for controlling *Opogona sacchari* (Bojer)	LY/T 2845－2017	Control	IS
78	Code of practice for integrated management of *Eichhornia crassipes* (Mart.) Solms	NY/T 3019－2016	Control	IS

Database_Invasive alien species (IAS) that have been identified in China. CN-Key: List on the Chinese list of key IAS under state supervision.

No.	Phylum	Class	Order	Family	Scientific name	Category	CN-Key	Reference
1	Dinophyta	Dinophyceae	Gonyulacales	Gonyaulaceae	*Alexandrium catenella*	algae		1
2	Ochrophyta	Bacillariophyceae	Bacillariales	Bacillariaceae	*Bacillaria paxillifera*	algae		2
3	Haptophyta	Prymnesiophyceae	Phaeocystales	Phaeocystaceae	*Chaetoceros concavicornis*	algae		1
4	Bacillariophyta	Bacillariophyceae	Bacillariales	Bacillariaceae	*Cylindrotheca closterium*	algae		1
5	Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia ligulata*	algae		3
6	Myzozoa	Dinophyceae	Gymnodiniales	Gymnodiniaceae	*Gymnodinium catenatum*	algae		4
7	Ochrophyta	Bacillariophyceae	Melosirales	Melosiraceae	*Melosiar cancellate*	algae		1
8	Ochrophyta	Bacillariophyceae	Naviculales	Pinnulariaceae	*Navicula sudetica* var. *sudetica*	algae		1
9	Ochrophyta	Bacillariophyceae	Bacillariales	Bacillariaceae	*Nitzschia delicatissima*	algae		1
10	Myzozoa	Dinophyceae	Peridiniales	Peridiniaceae	*Peridinium perardiforme*	algae		1
11	Myzozoa	Dinophyceae	Prorocentrales	Prorocentraceae	*Prorocentrum balticum*	algae		1
12	Myzozoa	Dinophyceae	Prorocentrales	Prorocentraceae	*Prorocentrum gracile*	algae		1
13	Myzozoa	Dinophyceae	Prorocentrales	Prorocentraceae	*Prorocentrum minimum*	algae		1
14	Myzozoa	Dinophyceae	Peridiniales	Peridiniaceae	*Scrippsiella trochoidea*	algae		1
15	Chordata	Reptilia	Testudines	Chelydridae	*Chelydra serpentina*	amphibian or reptile		2
16	Chordata	Amphibia	Anura	Ranidae	*Lithobates grylio*	amphibian or reptile		2
17	Chordata	Reptilia	Testudines	Chelydridae	*Macroclemys temminckii*	amphibian or reptile	Yes	5
18	Chordata	Amphibia	Anura	Ranidae	*Rana catesbeiana*	amphibian or reptile	Yes	5
19	Chordata	Reptilia	Testudines	Emydidae	*Trachemys scripta*	amphibian or reptile		3
20	Chordata	Reptilia	Testudines	Emydidae	*Trachemys scripta elegans*	amphibian or reptile	Yes	5
21	Arthropoda	Maxillopoda	Sessilia	Balanidae	*Amphibalanus improvisus*	aquatic invertebrate		6
22	Mollusca	Bivalvia	Mytilida	Mytilidae	*Arcuatula senhousia*	aquatic invertebrate		6
23	Arthropoda	Maxillopoda	Sessilia	Balanidae	*Balanus eburneus*	aquatic invertebrate		2
24	Bryozoa	Gymnolaemata	Cheilostomatida	Bugulidae	*Bugula neritina*	aquatic invertebrate		6

25	Mollusca	Bivalvia	Ostreida	Ostreidae	*Crassostrea gigas*	aquatic invertebrate		3
26	Mollusca	Gastropoda	Littorinimorpha	Calyptraeidae	*Crepidula onyx*	aquatic invertebrate		7
27	Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir sinensis*	aquatic invertebrate		3
28	Mollusca	Gastropoda	Lepetellida	Haliotidae	*Haliotis discus discus*	aquatic invertebrate		3
29	Mollusca	Bivalvia	Mytilida	Mytilidae	*Musculista senhousia*	aquatic invertebrate		2
30	Mollusca	Bivalvia	Myida	Dreissenidae	*Mytilopsis sallei*	aquatic invertebrate		6
31	Mollusca	Bivalvia	Mytilida	Mytilidae	*Mytilus galloprovincialis*	aquatic invertebrate		3
32	Mollusca	Gastropoda	Gastropoda	Physidae	*Physa acuta*	aquatic invertebrate		7
33	Mollusca	Gastropoda	Architaenioglossa	Ampullariidae	*Pomacea canaliculata*	aquatic invertebrate	Yes	5
34	Mollusca	Gastropoda	Architaenioglossa	Ampullariidae	*Pomacea insularum*	aquatic invertebrate		2
35	Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	aquatic invertebrate		3
36	Bryozoa	Gymnolaemata	Cheilostomatida	Schizoporellidae	*Schizoporella errata*	aquatic invertebrate		6
37	Arthropoda	Malacostraca	Decapoda	Portunidae	*Scylla serrata*	aquatic invertebrate		3
38	Arthropoda	Malacostraca	Isopoda	Sphaeromatidae	*Sphaeroma walkeri*	aquatic invertebrate		2
39	Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus intermedius*	aquatic invertebrate		3
40	Mollusca	Bivalvia	Arcida	Arcidae	*Tegillarca granosa*	aquatic invertebrate		2
41	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Aeschynomene indica*	aquatic plant		2
42	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Alternanthera paronychioides*	aquatic plant		8
43	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Alternanthera philoxeroides*	aquatic plant	Yes	5
44	Tracheophyta	Magnoliopsida	Myrtales	Lythraceae	*Ammannia coccinea*	aquatic plant		2
45	Tracheophyta	Polypodiopsida	Salviniales	Salviniaceae	*Azolla filiculoides*	aquatic plant		2
46	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Bidens frondosa*	aquatic plant		2
47	Tracheophyta	Magnoliopsida	Nymphaeales	Cabombaceae	*Cabomba caroliniana*	aquatic plant	Yes	5
48	Tracheophyta	Magnoliopsida	Ceratophyllales	Ceratophyllaceae	*Ceratophyllum demersum*	aquatic plant		4
49	Tracheophyta	Liliopsida	Poales	Cyperaceae	*Cyperus rotundus*	aquatic plant		2
50	Tracheophyta	Liliopsida	Alismatales	Hydrocharitaceae	*Egeria densa*	aquatic plant		7
51	Tracheophyta	Liliopsida	Commelinales	Pontederiaceae	*Eichhornia crassipes*	aquatic plant	Yes	5
52	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Gymnocoronis spilanthoides*	aquatic plant		7

53	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Hydrocotyle verticillata*	aquatic plant		2
54	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Hydrocotyle vulgaris*	aquatic plant		8
55	Tracheophyta	Liliopsida	Alismatales	Araceae	*Lemna aequinoctialis*	aquatic plant		2
56	Tracheophyta	Liliopsida	Alismatales	Alismataceae	*Limnocharis flava*	aquatic plant		8
57	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Ludwigia hyssopifolia*	aquatic plant		8
58	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Ludwigia octovalvis*	aquatic plant		7
59	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Myosoton aquaticum*	aquatic plant		8
60	Tracheophyta	Magnoliopsida	Saxifragales	Haloragaceae	*Myriophyllum aquaticum*	aquatic plant		2
61	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Nasturtium officinale*	aquatic plant		8
62	Tracheophyta	Liliopsida	Poales	Poaceae	*Panicum dichotomiflorum*	aquatic plant		2
63	Tracheophyta	Liliopsida	Poales	Poaceae	*Phalaris arundinacea*	aquatic plant		4
64	Tracheophyta	Liliopsida	Alismatales	Araceae	*Pistia stratiotes*	aquatic plant	Yes	5
65	Tracheophyta	Polypodiopsida	Salviniales	Salviniaceae	*Salvinia molesta*	aquatic plant		2
66	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Sesbania cannabina*	aquatic plant		2
67	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Sesbania herbacea*	aquatic plant		2
68	Tracheophyta	Liliopsida	Poales	Poaceae	*Spartina anglica*	aquatic plant		6
69	Ochrophyta	Phaeophyceae	Laminariales	Alariaceae	*Undaria pinnatifida*	aquatic plant		9
70	Chordata	Aves	Passeriformes	Sturnidae	*Aplonis panayensis*	bird		1
71	Chordata	Aves	Anseriformes	Anatidae	*Branta canadensis*	bird		1
72	Chordata	Aves	Psittaciformes	Cacatuidae	*Cacacatua sulpurea*	bird		1
73	Chordata	Aves	Psittaciformes	Psittacidae	*Psittacula krameri*	bird		1
74	Chordata	Aves	Passeriformes	Sturnidae	*Sturnus nigricollis*	bird		1
75	Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla anguilla*	fish		3
76	Chordata	Actinopterygii	Anguilliformes	Anguillidae	*Anguilla rostrata*	fish		3
77	Chordata	Actinopterygii	Lepisosteiformes	Lepisosteidae	*Atractosteus spatula*	fish	Yes	5
78	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius cuvieri*	fish		3
79	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Carassius auratus gibelio*	fish		3
80	Chordata	Actinopterygii	Perciformes	Channidae	*Channa striatus*	fish		3
81	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cirrhinus mrigala*	fish		3

82	Chordata	Actinopterygii	Siluriformes	Clariidae	*Clarias batrachus*	fish		3
83	Chordata	Actinopterygii	Siluriformes	Clariidae	*Clarias gariepinus*	fish		3
84	Chordata	Actinopterygii	Perciformes	Cichlidae	*Coptodon zillii*	fish	Yes	5
85	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Ctenopharyngodon idellus*	fish		3
86	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio* var. *mirror*	fish		3
87	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Cyprinus carpio* var. *specularis*	fish		3
88	Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia affinis*	fish		6
89	Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Gambusia holbrooki*	fish		6
90	Chordata	Actinopterygii	Osmeriformes	Osmeridae	*Hypomesus olidus*	fish		3
91	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hypophthalmichthys molitrix*	fish		3
92	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Hypophthalmichthys nobilis*	fish		3
93	Chordata	Actinopterygii	Siluriformes	Ictaluridae	*Ictalurus punctatus*	fish		3
94	Chordata	Actinopterygii	Cypriniformes	Catostomidae	*Ictiobus cyprinellus*	fish		3
95	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Labeo rohita*	fish		3
96	Chordata	Actinopterygii	Perciformes	Latidae	*Lates calcarifer*	fish		3
97	Chordata	Actinopterygii	Perciformes	Centrarchidae	*Lepomis macrochirus*	fish		3
98	Chordata	Actinopterygii	Perciformes	Centrarchidae	*Micropterus salmoides*	fish		3
99	Chordata	Actinopterygii	Perciformes	Moronidae	*Morone saxatilis*	fish		3
100	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Mylopharyngodon piceus*	fish		3
101	Chordata	Actinopterygii	Osmeriformes	Salangidae	*Neosalanx taihuensis*	fish		3
102	Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus kisutch*	fish		3
103	Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	fish		3
104	Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis aureus*	fish		3
105	Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis mossambicus*	fish		3
106	Chordata	Actinopterygii	Perciformes	Cichlidae	*Oreochromis niloticus*	fish		3
107	Chordata	Actinopterygii	Perciformes	Percidae	*Perca fluviatilis*	fish		2
108	Chordata	Actinopterygii	Characiformes	Serrasalmidae	*Piaractus brachypomus*	fish		3
109	Chordata	Actinopterygii	Cyprinodontiformes	Poeciliidae	*Poecilia reticulata*	fish		2

110	Chordata	Actinopterygii	Osmeriformes	Salangidae	*Protosalanx chinensis*	fish		3
111	Chordata	Actinopterygii	Siluriformes	Loricariidae	*Pterygoplichthys pardalis*	fish	Yes	5
112	Chordata	Actinopterygii	Characiformes	Serrasalmidae	*Pygocentrus nattereri*	fish		3
113	Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salmo salar*	fish		3
114	Chordata	Actinopterygii	Salmoniformes	Salmonidae	*Salvelinus fontinalis*	fish		3
115	Chordata	Actinopterygii	Perciformes	Percidae	*Sander lucioperca*	fish		3
116	Chordata	Actinopterygii	Siluriformes	Siluridae	*Silurus glanis*	fish		3
117	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	*Tinca tinca*	fish		3
118	Chordata	Mammalia	Rodentia	Myocastoridae	*Myocastor coypus*	mammal		6
119	Chordata	Mammalia	Rodentia	Cricetidae	*Ondatra zibethicus*	mammal		2
120	Chordata	Mammalia	Artiodactyla	Bovidae	*Ovis aries*	mammal		4
121	Chordata	Mammalia	Rodentia	Muridae	*Rattus rattus*	mammal		2
122	Proteobacteria	Gammaproteobacteria	Burkholderiales	Burkholderiaceae	*Acidovorax avenae* subsp. *citrulli*	microbe		1
123	Ascomycota	Dothideomycetes	Pleosporales	Pleosporaceae	*Alternaria brassicicola*	microbe		1
124	Oomycota	Peronosporea	Saprolegniales	Leptolegniaceae	*Aphanomyces astaci*	microbe		10
125	Negarnaviricota	Insthoviricetes	Articulavirales	Orthomyxoviridae	Avian influenza virus	microbe		4
126	Cressdnaviricota	Arfiviricetes	Mulpavirales	Nanoviridae	Banana bunchy top virus	microbe		10
127	Chytridiomycota	Rhizophydiomycetes	Rhizophydiales		*Batrachochytrium dendrobatidis*	microbe		10
128	Kitrinoviricota	Alsuviricetes	Hepelivirales	Benyviridae	Beet necrotic yellow vein virus	microbe		1
129	Ascomycota	Dothideomycetes	Botryosphaeriales	Phyllostictaceae	*Botryosphaeria laricina*	microbe	Yes	5
130	Ascomycota	Sordariomycetes	Microascales	Ceratocystidaceae	*Ceratocystis fimbriata*	microbe		1
131	Ascomycota	Sordariomycetes	Magnaporthales	Ceratosphaeriaceae	*Ceratosphaeria phyllostachydis*	microbe		11
132	Ascomycota	Dothideomycetes	Capnodiales	Cladosporiaceae	*Cladosporium cucumerinum*	microbe		1
133	Actinobacteriota	Actinomycetia	Actinomycetales	Microbacteriaceae	*Clavibacter michiganensis* subsp. *michiganensis*	microbe		1
134	Actinobacteriota	Actinomycetia	Actinomycetales	Microbacteriaceae	*Clavibacter michiganensis* subsp. *sepedonicus*	microbe		1

135	Cressdnaviricota	Repensiviricetes	Geplafuvirales	Geminiviridae	Cotton leaf curl Multan virus	microbe		1
136	Basidiomycota	Pucciniomycetes	Pucciniales	Cronartiaceae	*Cronartium ribicola*	microbe		1
137	Ascomycota	Sordariomycetes	Diaporthales	Cryphonectriaceae	*Cryphonectria parasitica*	microbe		1
138	Ascomycota	Sordariomycetes	Diaporthales	Gnomoniaceae	*Cryptodiaporthe populea*	microbe		1
139	Kitrinoviricota	Alsuviricetes	Martellivirales	Virgaviridae	Cucumber green mottle mosaic virus	microbe		1
140	Ascomycota	Sordariomycetes	Hypocreales	Nectriaceae	*Cylindrocladium scoparium*	microbe		1
141	Proteobacteria	Gammaproteobacteria	Enterobacterales	Enterobacteriaceae	*Erwinia amylovora*	microbe	Yes	5
142	Proteobacteria	Gammaproteobacteria	Enterobacterales	Enterobacteriaceae	*Erwinia pyrifoliae*	microbe	Yes	5
143	Mycobionta	Hyphomycetes	Tubercularіales	Tubercularіaceae	*Fusarium oxysporum* f. sp. *dianthi*	microbe		1
144	Mycobionta	Hyphomycetes	Tubercularіales	Tubercularіaceae	*Fusarium oxysporum* f. sp. *vasinfectum*	microbe		1
145	Mycobionta	Hyphomycetes	Tubercularіales	Tubercularіaceae	*Fusarium oxysporum* f. sp. *cubense* (*Race 4*)	microbe	Yes	5
146	Mycobionta	Hyphomycetes	Tubercularіales	Tubercularіaceae	*Fusatium oxysporum* f. sp. *asparagi*	microbe		1
147	Ascomycota	Leotiomycetes	Helotiales	Lachnaceae	*Lachnellula willkommii*	microbe		1
148	Ascomycota	Leotiomycetes	Helotiales	Sclerotiniaceae	*Monilinia fructicola*	microbe		1
149	Ascomycota	Dothideomycetes	Capnodiales	Mycosphaerellaceae	*Mycosphaerella fijiesis*	microbe		1
150	Ascomycota	Dothideomycetes	Capnodiales	Mycosphaerellaceae	*Mycosphaerella pini*	microbe		1
151	Firmicutes	Mollicutes	Acholeplasmatales	Acholeplasmatacea	Paulownia witches'-broom Phytoplasma	microbe		1
152	Firmicutes	Mollicutes	Acholeplasmatales	Acholeplasmatacea	Pear decline hytoplasma	microbe		1
153	Oomycota	Peronosporea	Peronosporales	Peronosporaceae	*Peronosclerospora maydis*	microbe		1
154	Oomycota	Peronosporea	Peronosporales	Peronosporaceae	*Peronosclerospora sacchari*	microbe		1
155	Oomycota	Peronosporea	Peronosporales	Peronosporaceae	*Phytophthora infestans*	microbe		1
156	Oomycota	Peronosporea	Peronosporales	Peronosporaceae	*Phytophthora nicotianae*	microbe		1
157	Oomycota	Peronosporea	Peronosporales	Peronosporaceae	*Phytophthora sojae*	microbe		1
158	Ascomycota	Leotiomycetes	Erysiphales	Erysiphaceae	*Podosphaera spiraea*	microbe		6
159	Kitrinoviricota	Alsuviricetes	Tymovirales	Betaflexiviridae	Poplar mosaic virus	microbe		1

160	Kitrinoviricota	Alsuviricetes	Martellivirales	Bromoviridae	Prunus necrotic ringspot virus	microbe	1
161	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	*Pseudomonas syringae* pv. *savastanoi*	microbe	1
162	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	*Pseudomonas syringae* pv. *tomato*	microbe	1
163	Basidiomycota	Pucciniomycetes	Pucciniales	Pucciniaceae	*Puccinia graminis* f. sp. *tritici* (Race Ug99)	microbe	1
164	Proteobacteria	Gammaproteobacteria	Burkholderiales	Burkholderiaceae	*Ralstonia solanacearum*	microbe	1
165	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	Rickettsiae-like organism gloeosporioides Penz	microbe	1
166	Ascomycota	Dothideomycetes	Capnodiales	Mycosphaerellaceae	*Scirrhia aciola*	microbe	1
167	Duplornaviricota	Resentoviricetes	Reovirales	Reoviridae	Southern rice black-streaked dwarf virus	microbe	1
168	Ascomycota	Dothideomycetes	Venturiales	Venturiaceae	*Spilocaea oleaginea*	microbe	1
169	Chytridiomycota	Chytridiomycetes	Chytridiales	Synchytriaceae	*Synchytrium endobioticum*	microbe	1
170	Ascomycota	Taphrinomycetes	Taphrinales	Taphrinaceae	*Taphrina deformans*	microbe	1
171	Pisuviricota	Pisoniviricetes	Picornavirales	Secoviridae	Tobacco ring spot virus	microbe	1
172	Pisuviricota	Pisoniviricetes	Picornavirales	Secoviridae	Tomato ring spot virus	microbe	1
173	Negarnaviricota	Ellioviricetes	Bunyavirales	Bunyaviridae	Tomato spotted wilt virus	microbe	1
174	Pisuviricota	Stelpaviricetes	Patatavirales	Potyviridae	Tuberose mild mottle virus	microbe	6
175	Ascomycota	Dothideomycetes	Venturiales	Venturiaceae	*Venturia inaequalis*	microbe	1
176	Ascomycota	Sordariomycetes	Glomerellales	Plectosphaerellacea	*VerticiIlium dahliae*	microbe	11
177	Ascomycota	Sordariomycetes	Glomerellales	Plectosphaerellaceae	*Verticillium alboatrum*	microbe	1
178	Ascomycota	Sordariomycetes	Glomerellales	Plectosphaerellaceae	*Verticillium dahliae*	microbe	1
179	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Xanthomonas axonopodis* pv. *manihotis*	microbe	1
180	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Xanthomonas campestris* pv. *citri*	microbe	1
181	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Xanthomonas oryzae* pv. *oryzae*	microbe	1
182	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Xanthomonas oryzae* pv. *oryzicola*	microbe	1

183	Pisuviricota	Nidovirales	Ronidovirineae	Roniviridae	Yellow head baculovirus	microbe		1
184	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Acanthoscelides macrophthalmus*	terrestrial invertebrate		7
185	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Acanthoscelides obtectus*	terrestrial invertebrate		7
186	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Acanthoscelides pallidipennis*	terrestrial invertebrate		7
187	Mollusca	Gastropoda	Stylommatophora	Achatinidae	*Achatina fulica*	terrestrial invertebrate	Yes	5
188	Arthropoda	Insecta	Coleoptera	Buprestidae	*Agrilus mali*	terrestrial invertebrate		7
189	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Aleurodicus dispersus*	terrestrial invertebrate		2
190	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Aleyrodes proletella*	terrestrial invertebrate		7
191	Mollusca	Gastropoda	Stylommatophora	Limacidae	*Ambigolimax valentianus*	terrestrial invertebrate		2
192	Arthropoda	Insecta	Lepidoptera	Gelechiidae	*Anarsia lineatella*	terrestrial invertebrate		1
193	Nematoda	Chromadorea	Rhabditida	Anguinidae	*Anguina agrostis*	terrestrial invertebrate		2
194	Arthropoda	Insecta	Hymenoptera	Formicidae	*Anoplolepis gracilipes*	terrestrial invertebrate		1
195	Arthropoda	Insecta	Coleoptera	Dermestidae	*Anthrenus verbasci*	terrestrial invertebrate		2
196	Arthropoda	Insecta	Hemiptera	Phylloxeridae	*Aphanostigma piri*	terrestrial invertebrate		2
197	Nematoda	Chromadorea	Rhabditida	Aphelenchoididae	*Aphelenchoides bessseyi*	terrestrial invertebrate		1
198	Nematoda	Chromadorea	Rhabditida	Aphelenchoididae	*Aphelenchoides ritzemabosi*	terrestrial invertebrate		1
199	Arthropoda	Insecta	Hymenoptera	Apidae	*Apis mellifera*	terrestrial invertebrate		7
200	Arthropoda	Insecta	Coleoptera	Anthribidae	*Araecerus fasciculatus*	terrestrial invertebrate		2
201	Arthropoda	Insecta	Diptera	Tephritidae	*Bactrocera correcta*	terrestrial invertebrate		1
202	Arthropoda	Insecta	Diptera	Tephritidae	*Bactrocera cucurbitae*	terrestrial invertebrate		2
203	Arthropoda	Insecta	Diptera	Tephritidae	*Bactrocera dorsalis*	terrestrial invertebrate		2
204	Arthropoda	Insecta	Diptera	Tephritidae	*Bactrocera minax*	terrestrial invertebrate		7
205	Arthropoda	Insecta	Diptera	Tephritidae	*Bactrocera tsuneonis*	terrestrial invertebrate		2
206	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Bemisia tabaci*	terrestrial invertebrate		2
207	Arthropoda	Insecta	Blattodea	Ectobiidae	*Blattella germanica*	terrestrial invertebrate		2
208	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Brontispa longissima*	terrestrial invertebrate		2
209	Arthropoda	Insecta	Hymenoptera	Eurytomidae	*Bruchophagus gibbus*	terrestrial invertebrate		2
210	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Bruchus pisorum*	terrestrial invertebrate		2

211	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Bruchus rufimanus*	terrestrial invertebrate		2
212	Nematoda	Chromadorea	Rhabditida	Aphelenchoididae	*Bursaphelenchus xylophilus*	terrestrial invertebrate	Yes	5
213	Arthropoda	Insecta	Coleoptera	Bruchuidae	*Callosobruchus ademptus*	terrestrial invertebrate		1
214	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Callosobruchus maculatus*	terrestrial invertebrate		2
215	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Callosobruchus phaseoli*	terrestrial invertebrate		7
216	Arthropoda	Insecta	Diptera	Tephritidae	*Carpomya vesuviana*	terrestrial invertebrate		2
217	Arthropoda	Insecta	Coleoptera	Silvanidae	*Cathartus advena*	terrestrial invertebrate		2
218	Arthropoda	Insecta	Hemiptera	Coccidae	*Ceroplastes rusci*	terrestrial invertebrate		12
219	Arthropoda	Arachnida	Trombidiformes	Diptilomiopidae	*Cheiracus sulcatus*	terrestrial invertebrate		7
220	Arthropoda	Insecta	Hemiptera	Aphididae	*Cinara cupressi*	terrestrial invertebrate		10
221	Arthropoda	Insecta	Diptera	Cecidomyiidae	*Contarinia maculipennis*	terrestrial invertebrate		7
222	Arthropoda	Insecta	Diptera	Cecidomyiidae	*Contarinia sorghicola*	terrestrial invertebrate		1
223	Arthropoda	Insecta	Blattodea	Rhinotermitidae	*Coptotermes gestroi*	terrestrial invertebrate		6
224	Arthropoda	Insecta	Hemiptera	Tingidae	*Corythucha ciliata*	terrestrial invertebrate		2
225	Arthropoda	Insecta	Coleoptera	Curculionidae	*Cryptorhynchus lapathi*	terrestrial invertebrate		2
226	Arthropoda	Insecta	Lepidoptera	Tortricidae	*Cydia pomonella*	terrestrial invertebrate	Yes	5
227	Arthropoda	Insecta	Lepidoptera	Tortricidae	*Cydia prunivora*	terrestrial invertebrate		1
228	Arthropoda	Insecta	Coleoptera	Brentidae	*Cylas formicarius*	terrestrial invertebrate		2
229	Arthropoda	Insecta	Hemiptera	Phylloxeridae	*Daktulosphaira vitifoliae*	terrestrial invertebrate		7
230	Arthropoda	Insecta	Coleoptera	Curculionidae	*Dendroctonus valens*	terrestrial invertebrate	Yes	5
231	Arthropoda	Insecta	Lepidoptera	Lasiocampidae	*Dendrolimus sibiricus*	terrestrial invertebrate		4
232	Arthropoda	Insecta	Hemiptera	Liviidae	*Diaphorina citri*	terrestrial invertebrate		4
233	Arthropoda	Insecta	Coleoptera	Dryophthoridae	*Diocalandra frumenti*	terrestrial invertebrate		7
234	Nematoda	Chromadorea	Rhabditida	Anguinidae	*Ditylenchus destructor*	terrestrial invertebrate		7
235	Nematoda	Chromadorea	Rhabditida	Anguinidae	*Ditylenchus dispaci*	terrestrial invertebrate		1
236	Arthropoda	Insecta	Hemiptera	Pseudococcidae	*Dysmicoccus brevipes*	terrestrial invertebrate		2
237	Arthropoda	Insecta	Hemiptera	Pseudococcidae	*Dysmicoccus neobrevipes*	terrestrial invertebrate		2
238	Arthropoda	Insecta	Hemiptera	Aphididae	*Eriosoma lanigerum*	terrestrial invertebrate		2
239	Arthropoda	Insecta	Thysanoptera	Thripidae	*Frankliniella cephalica*	terrestrial invertebrate		6

240	Arthropoda	Insecta	Thysanoptera	Thripidae	*Frankliniella occidentalis*	terrestrial invertebrate		6
241	Mollusca	Gastropoda	Stylommatophora	Helicidae	*Helix lucorum*	terrestrial invertebrate		7
242	Arthropoda	Insecta	Hemiptera	Diaspididae	*Hemiberlesia pitysophila*	terrestrial invertebrate		2
243	Arthropoda	Insecta	Coleoptera	Bostrichidae	*Heterobostrychus aequalis*	terrestrial invertebrate		2
244	Nematoda	Chromadorea	Rhabditida	Heteroderidae	*Heterodera avenae*	terrestrial invertebrate		7
245	Nematoda	Chromadorea	Rhabditida	Heteroderidae	*Heterodera glycines*	terrestrial invertebrate		1
246	Arthropoda	Insecta	Coleoptera	Curculionidae	*Hylastes ater*	terrestrial invertebrate		4
247	Arthropoda	Insecta	Coleoptera	Curculionidae	*Hypera postica*	terrestrial invertebrate		2
248	Arthropoda	Insecta	Lepidoptera	Erebidae	*Hyphantria cunea*	terrestrial invertebrate	Yes	5
249	Arthropoda	Insecta	Hemiptera	Margarodidae	*Icerya aegyptiaca*	terrestrial invertebrate		7
250	Arthropoda	Insecta	Hemiptera	Margarodidae	*Icerya purchasi*	terrestrial invertebrate		2
251	Arthropoda	Insecta	Blattodea	Kalotermitidae	*Incisitermes minor*	terrestrial invertebrate		2
252	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Javeta pallida*	terrestrial invertebrate		7
253	Arthropoda	Insecta	Coleoptera	Anobiidae	*Lasioderma serricorne*	terrestrial invertebrate		7
254	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Leptinotarsa decemlineata*	terrestrial invertebrate	Yes	5
255	Arthropoda	Insecta	Hymenoptera	Eulophidae	*Leptocybe invasa*	terrestrial invertebrate		2
256	Arthropoda	Insecta	Diptera	Agromyzidae	*Liriomyza bryoniae*	terrestrial invertebrate		2
257	Arthropoda	Insecta	Diptera	Agromyzidae	*Liriomyza huidobrensis*	terrestrial invertebrate		2
258	Arthropoda	Insecta	Diptera	Agromyzidae	*Liriomyza sativae*	terrestrial invertebrate	Yes	5
259	Arthropoda	Insecta	Diptera	Agromyzidae	*Liriomyza trifolii*	terrestrial invertebrate		2
260	Arthropoda	Insecta	Coleoptera	Brachyceridae	*Lissorhoptrus oryzophilus*	terrestrial invertebrate	Yes	5
261	Arthropoda	Insecta	Hemiptera	Margarodidae	*Matsucoccus matsumurae*	terrestrial invertebrate	Yes	5
262	Arthropoda	Insecta	Diptera	Cecidomyiidae	*Mayetiola destructor*	terrestrial invertebrate		2
263	Arthropoda	Insecta	Coleoptera	Bostrichidae	*Micrapate simplicipennis*	terrestrial invertebrate		7
264	Arthropoda	Insecta	Coleoptera	Cleridae	*Necrobia ruficollis*	terrestrial invertebrate		2
265	Arthropoda	Insecta	Coleoptera	Cleridae	*Necrobia rufipes*	terrestrial invertebrate		2
266	Arthropoda	Insecta	Diptera	Cecidomyiidae	*Obolodiplosis robiniae*	terrestrial invertebrate		2
267	Arthropoda	Insecta	Coleoptera	Curculionidae	*Ochyromera ligustri*	terrestrial invertebrate		7
268	Arthropoda	Insecta	Coleoptera	Chrysomelidae	*Octodonta nipae*	terrestrial invertebrate		2

269	Arthropoda	Insecta	Lepidoptera	Oecophoridae	*Opisina arenosella*	terrestrial invertebrate		12
270	Arthropoda	Insecta	Lepidoptera	Tineidae	*Opogona sacchari*	terrestrial invertebrate		6
271	Arthropoda	Insecta	Hemiptera	Pseudococcidae	*Oracella acuta*	terrestrial invertebrate	Yes	5
272	Arthropoda	Insecta	Coleoptera	Curculionidae	*Orthotomicus erosus*	terrestrial invertebrate		4
273	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Paraleyrodes minei*	terrestrial invertebrate		7
274	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Paraleyrodes pseudonaranjae*	terrestrial invertebrate		7
275	Arthropoda	Insecta	Lepidoptera	Pyralidae	*Paralipsa gularis*	terrestrial invertebrate		2
276	Arthropoda	Insecta	Hemiptera	Coccidae	*Parasaissetia nigra*	terrestrial invertebrate		2
277	Arthropoda	Insecta	Lepidoptera	Gelechiidae	*Pectinophora gossypiella*	terrestrial invertebrate		2
278	Arthropoda	Insecta	Blattodea	Blattidae	*Periplaneta americana*	terrestrial invertebrate		2
279	Arthropoda	Insecta	Blattodea	Blattidae	*Periplaneta australasiae*	terrestrial invertebrate		2
280	Arthropoda	Insecta	Coleoptera	Erotylidae	*Pharaxonotha kirschii*	terrestrial invertebrate		7
281	Arthropoda	Insecta	Hymenoptera	Formicidae	*Pheidole megacephala*	terrestrial invertebrate		2
282	Arthropoda	Insecta	Hemiptera	Pseudococcidae	*Phenacoccus solenopsis*	terrestrial invertebrate	Yes	5
283	Arthropoda	Insecta	Lepidoptera	Gelechiidae	*Phthorimaea operculella*	terrestrial invertebrate		2
284	Platyhelminthes	Turbellaria	Tricladida	Geoplanidae	*Platydemus manokwari*	terrestrial invertebrate		10
285	Arthropoda	Insecta	Coleoptera	Rutelidae	*Popillia japonica*	terrestrial invertebrate		2
286	Arthropoda	Insecta	Hymenoptera	Eulophidae	*Quadrastichus erythrinae*	terrestrial invertebrate		6
287	Nematoda	Chromadorea	Rhabditida	Pratylenchidae	*Radopholus similis*	terrestrial invertebrate		2
288	Arthropoda	Insecta	Coleoptera	Dryophthoridae	*Rhabdoscelus lineaticollis*	terrestrial invertebrate		2
289	Arthropoda	Insecta	Coleoptera	Dryophthoridae	*Rhynchophorus ferrugineus*	terrestrial invertebrate	Yes	5
290	Arthropoda	Insecta	Hymenoptera	Siricidae	*Sirex noctilio*	terrestrial invertebrate		12
291	Arthropoda	Insecta	Coleoptera	Dryophthoridae	*Sitophilus granarius*	terrestrial invertebrate		2
292	Arthropoda	Insecta	Hymenoptera	Formicidae	*Solenopsis geminata*	terrestrial invertebrate		2
293	Arthropoda	Insecta	Hymenoptera	Formicidae	*Solenopsis invicta*	terrestrial invertebrate	Yes	5
294	Arthropoda	Insecta	Lepidoptera	Noctuidae	*Spodoptera frugiperda*	terrestrial invertebrate	Yes	5
295	Arthropoda	Insecta	Hymenoptera	Formicidae	*Tapinoma melanocephalum*	terrestrial invertebrate		2
296	Arthropoda	Arachnida	Trombidiformes	Tetranychidae	*Tetranychus urticae*	terrestrial invertebrate		2
297	Arthropoda	Insecta	Diptera	Cecidomyiidae	*Thecodiplosis japonensis*	terrestrial invertebrate		7

298	Arthropoda	Insecta	Coleoptera	Curculionidae	*Tomicus piniperda*	terrestrial invertebrate		4
299	Arthropoda	Insecta	Hemiptera	Aleyrodidae	*Trialeurodes vaporariorum*	terrestrial invertebrate		2
300	Arthropoda	Insecta	Coleoptera	Tenebrionidae	*Tribolium confusum*	terrestrial invertebrate		7
301	Arthropoda	Insecta	Coleoptera	Dermestidae	*Trogoderma granarium*	terrestrial invertebrate		2
302	Arthropoda	Insecta	Lepidoptera	Gelechiidae	*Tuta absoluta*	terrestrial invertebrate	Yes	5
303	Arthropoda	Insecta	Hymenoptera	Siricidae	*Urocerus gigas taiganus*	terrestrial invertebrate		7
304	Arthropoda	Insecta	Hemiptera	Phylloxeridae	*Viteus vitifoliae*	terrestrial invertebrate		1
305	Arthropoda	Insecta	Coleoptera	Cerambycidae	*Xylotrechus rusticus*	terrestrial invertebrate		7
306	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Abutilon theophrasti*	terrestrial plant		2
307	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia catechu*	terrestrial plant		7
308	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia confusa*	terrestrial plant		8
309	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia dealbata*	terrestrial plant		7
310	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia decurrens*	terrestrial plant		2
311	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia glauca*	terrestrial plant		7
312	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia mangium*	terrestrial plant		4
313	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia mearnsii*	terrestrial plant		8
314	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia melanoxylon*	terrestrial plant		4
315	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Acacia spinosa*	terrestrial plant		7
316	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Acanthospermum australe*	terrestrial plant		6
317	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Acanthospermum hispidum*	terrestrial plant		6
318	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Achillea millefolium*	terrestrial plant		6
319	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Acmella paniculata*	terrestrial plant		7
320	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Acmella radicans* var. *debilis*	terrestrial plant		2
321	Tracheophyta	Magnoliopsida	Lamiales	Acanthaceae	*Adhatoda vasica*	terrestrial plant		7
322	Tracheophyta	Liliopsida	Poales	Poaceae	*Aegilops tauschii*	terrestrial plant		2
323	Tracheophyta	Liliopsida	Poales	Poaceae	*Aegilops triuncialis*	terrestrial plant		8
324	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Aeschynomene americana*	terrestrial plant		2
325	Tracheophyta	Liliopsida	Asparagales	Asparagaceae	*Agave americana*	terrestrial plant		4
326	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ageratina adenophora*	terrestrial plant	Yes	5

327	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ageratum conyzoides*	terrestrial plant	Yes	5
328	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ageratum houstonianum*	terrestrial plant		6
329	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Agrostemma githago*	terrestrial plant		2
330	Tracheophyta	Liliopsida	Poales	Poaceae	*Aira caryophyllea*	terrestrial plant		6
331	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Alliaria petiolata*	terrestrial plant		2
332	Tracheophyta	Liliopsida	Asparagales	Asphodelaceae	*Aloe vera*	terrestrial plant		6
333	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Alternanthera polygonoides*	terrestrial plant		7
334	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Alternanthera pungens*	terrestrial plant		8
335	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Alyssum alyssoides*	terrestrial plant		2
336	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus albus*	terrestrial plant		2
337	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus blitoides*	terrestrial plant		8
338	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus blitum*	terrestrial plant		2
339	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus caudatus*	terrestrial plant		2
340	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus cruentus*	terrestrial plant		6
341	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus dubius*	terrestrial plant		7
342	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus hybridus*	terrestrial plant		2
343	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus hypochondriacus*	terrestrial plant		8
344	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus palmeri*	terrestrial plant	Yes	5
345	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus polygonoides*	terrestrial plant		2
346	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus powellii*	terrestrial plant		7
347	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus retroflexus*	terrestrial plant		2
348	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus retroflexus* var. *delilei*	terrestrial plant		7
349	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus spinosus*	terrestrial plant	Yes	5
350	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus standleyanus*	terrestrial plant		7
351	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus tricolor*	terrestrial plant		8
352	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus tuberculatus*	terrestrial plant		2
353	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Amaranthus viridis*	terrestrial plant		2
354	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Amberboa glauca*	terrestrial plant		7

355	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Amberboa moschata*	terrestrial plant		7
356	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ambrosia artemisiifolia*	terrestrial plant	Yes	5
357	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ambrosia polystachya*	terrestrial plant		2
358	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ambrosia psilostachya*	terrestrial plant		2
359	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ambrosia trifida*	terrestrial plant	Yes	5
360	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Ammobium alatum*	terrestrial plant		7
361	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Amorpha fruticosa*	terrestrial plant		7
362	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Anoda cristata*	terrestrial plant		7
363	Tracheophyta	Magnoliopsida	Caryophyllales	Basellaceae	*Anredera cordifolia*	terrestrial plant	Yes	5
364	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Anthemis arvensis*	terrestrial plant		7
365	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Anthemis cotula*	terrestrial plant		7
366	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Anthemis tinctoria*	terrestrial plant		7
367	Tracheophyta	Magnoliopsida	Ranunculales	Papaveraceae	*Argemone mexicana*	terrestrial plant		2
368	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Argyranthemum frutescens*	terrestrial plant		7
369	Tracheophyta	Liliopsida	Poales	Poaceae	*Arrhenatherum elatius*	terrestrial plant		8
370	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Asclepias curassavica*	terrestrial plant		6
371	Tracheophyta	Liliopsida	Asparagales	Asparagaceae	*Asparagus densiflorus*	terrestrial plant		2
372	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Atriplex canescens*	terrestrial plant		2
373	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Atriplex nummularia*	terrestrial plant		2
374	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Atropa belladonna*	terrestrial plant		8
375	Tracheophyta	Liliopsida	Poales	Poaceae	*Avena fatua*	terrestrial plant	Yes	5
376	Tracheophyta	Liliopsida	Poales	Poaceae	*Avena sterilis*	terrestrial plant		2
377	Tracheophyta	Liliopsida	Poales	Poaceae	*Axonopus compressus*	terrestrial plant		7
378	Tracheophyta	Liliopsida	Poales	Poaceae	*Axonopus fissifolius*	terrestrial plant		6
379	Tracheophyta	Magnoliopsida	Lamiales	Acanthaceae	*Barleria cristata*	terrestrial plant		7
380	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Bellis perennis*	terrestrial plant		7
381	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Bidens alba*	terrestrial plant		2
382	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Bidens bipinnata*	terrestrial plant		2
383	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Bidens pilosa*	terrestrial plant	Yes	5

384	Tracheophyta	Magnoliopsida	Caryophyllales	Nyctaginaceae	*Bougainvillea glabra*	terrestrial plant	7
385	Tracheophyta	Liliopsida	Poales	Poaceae	*Brachiaria brizantha*	terrestrial plant	2
386	Tracheophyta	Liliopsida	Poales	Poaceae	*Brachiaria eruciformis*	terrestrial plant	2
387	Tracheophyta	Liliopsida	Poales	Poaceae	*Brachiaria mutica*	terrestrial plant	2
388	Tracheophyta	Liliopsida	Poales	Poaceae	*Brachypodium distachyon*	terrestrial plant	6
389	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Brauneria purpurea*	terrestrial plant	7
390	Tracheophyta	Liliopsida	Poales	Poaceae	*Bromus catharticus*	terrestrial plant	2
391	Tracheophyta	Liliopsida	Poales	Poaceae	*Bromus japonicus*	terrestrial plant	7
392	Tracheophyta	Magnoliopsida	Saxifragales	Crassulaceae	*Bryophyllum delagoense*	terrestrial plant	8
393	Tracheophyta	Magnoliopsida	Saxifragales	Crassulaceae	*Bryophyllum pinnatum*	terrestrial plant	7
394	Tracheophyta	Liliopsida	Poales	Poaceae	*Buchloe dactyloides*	terrestrial plant	8
395	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Bunias orientalis*	terrestrial plant	6
396	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Buphthalmum salicifolium*	terrestrial plant	7
397	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Calendula arvensis*	terrestrial plant	7
398	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Calendula officinalis*	terrestrial plant	7
399	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Calopogonium mucunoides*	terrestrial plant	2
400	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Calotropis procera*	terrestrial plant	6
401	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Cameraria latifolia*	terrestrial plant	2
402	Tracheophyta	Magnoliopsida	Rosales	Cannabaceae	*Cannabis sativa*	terrestrial plant	2
403	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Capsella bursa-pastoris*	terrestrial plant	8
404	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Cardamine flexuosa*	terrestrial plant	4
405	Tracheophyta	Magnoliopsida	Sapindales	Sapindaceae	*Cardiospermum halicacabum*	terrestrial plant	7
406	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Carthamus lanatus*	terrestrial plant	7
407	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Carthamus tinctorius*	terrestrial plant	7
408	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Cassia surattensis*	terrestrial plant	7
409	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Catharanthus roseus*	terrestrial plant	6
410	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Celosia argentea*	terrestrial plant	8
411	Tracheophyta	Liliopsida	Poales	Poaceae	*Cenchrus clandestinus*	terrestrial plant	4
412	Tracheophyta	Liliopsida	Poales	Poaceae	*Cenchrus echinatus*	terrestrial plant	2

413	Tracheophyta	Liliopsida	Poales	Poaceae	*Cenchrus longispinus*	terrestrial plant	Yes	5
414	Tracheophyta	Liliopsida	Poales	Poaceae	*Cenchrus polystachios*	terrestrial plant		4
415	Tracheophyta	Liliopsida	Poales	Poaceae	*Cenchrus spinifex*	terrestrial plant		13
416	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Centaurea cyanus*	terrestrial plant		7
417	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Centaurea diffusa*	terrestrial plant		7
418	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Centaurea nigrescens*	terrestrial plant		7
419	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Cerastium glomeratum*	terrestrial plant		8
420	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Cestrum nocturnum*	terrestrial plant		4
421	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Chamaecrista mimosoides*	terrestrial plant		8
422	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Chamaemelum nobile*	terrestrial plant		7
423	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Chenopodium album*	terrestrial plant		7
424	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Chenopodium ficifolium*	terrestrial plant		8
425	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Chenopodium glaucum*	terrestrial plant		8
426	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Chenopodium hybridum*	terrestrial plant		2
427	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Chenopodium pumilio*	terrestrial plant		7
428	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Chesneya astragalina*	terrestrial plant		7
429	Tracheophyta	Liliopsida	Poales	Poaceae	*Chloris gayana*	terrestrial plant		2
430	Tracheophyta	Liliopsida	Poales	Poaceae	*Chloris virgata*	terrestrial plant		8
431	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Chromolaena odorata*	terrestrial plant	Yes	5
432	Tracheophyta	Liliopsida	Poales	Poaceae	*Chrysopogon zizanioides*	terrestrial plant		6
433	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cichorium intybus*	terrestrial plant		8
434	Tracheophyta	Magnoliopsida	Brassicales	Cleomaceae	*Cleome gynandra*	terrestrial plant		7
435	Tracheophyta	Magnoliopsida	Brassicales	Cleomaceae	*Cleome rutidosperma*	terrestrial plant		6
436	Tracheophyta	Magnoliopsida	Cucurbitales	Cucurbitaceae	*Coccinia grandis*	terrestrial plant		7
437	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coleostephus myconis*	terrestrial plant		7
438	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Conium maculatum*	terrestrial plant		2
439	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Convolvulus arvensis*	terrestrial plant		7
440	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Convolvulus pilosellifolius*	terrestrial plant		7

441	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Conyza bonariensis* var. *leiotheca*	terrestrial plant		13
442	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis basalis*	terrestrial plant		7
443	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis grandiflora*	terrestrial plant		7
444	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis lanceolata*	terrestrial plant		2
445	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis tinctoria*	terrestrial plant		2
446	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis tripteris*	terrestrial plant		7
447	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Coreopsis verticillata*	terrestrial plant		7
448	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cosmos bipinnatus*	terrestrial plant		2
449	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cosmos sulphureus*	terrestrial plant		6
450	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Crassocephalum crepidioides*	terrestrial plant		2
451	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Crassocephalum rubens*	terrestrial plant		2
452	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria incana*	terrestrial plant		8
453	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria juncea*	terrestrial plant		8
454	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria micans*	terrestrial plant		8
455	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria ochroleuca*	terrestrial plant		8
456	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria pallida*	terrestrial plant		8
457	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Crotalaria trichotoma*	terrestrial plant		8
458	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Croton bonplandianus*	terrestrial plant		7
459	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Croton capitatus*	terrestrial plant		7
460	Tracheophyta	Magnoliopsida	Cucurbitales	Cucurbitaceae	*Cucumis melo*	terrestrial plant		7
461	Tracheophyta	Magnoliopsida	Cucurbitales	Cucurbitaceae	*Cucumis melo* subsp. *melo*	terrestrial plant		7
462	Tracheophyta	Magnoliopsida	Myrtales	Lythraceae	*Cuphea carthagenensis*	terrestrial plant		6
463	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Cuscuta approximata*	terrestrial plant		2
464	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Cuscuta australis*	terrestrial plant		7
465	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Cuscuta campestris*	terrestrial plant		2
466	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Cuscuta epilinum*	terrestrial plant		2
467	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cyclachaena xanthiifolia*	terrestrial plant	Yes	5
468	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Cyclospermum leptophyllum*	terrestrial plant		2

469	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Cymbalaria muralis*	terrestrial plant		7
470	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cynara cardunculus*	terrestrial plant		7
471	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Cynara scolymus*	terrestrial plant		7
472	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Dahlia pinnata*	terrestrial plant		7
473	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Datura ferox*	terrestrial plant		7
474	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Datura innoxia*	terrestrial plant		6
475	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Datura metel*	terrestrial plant		2
476	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Datura stramonium*	terrestrial plant		2
477	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Daucus carota*	terrestrial plant		2
478	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Desmanthus pernambucanus*	terrestrial plant		7
479	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Desmodium tortuosum*	terrestrial plant		8
480	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Digera muricata*	terrestrial plant		7
481	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Diodia teres*	terrestrial plant		2
482	Tracheophyta	Magnoliopsida	Lamiales	Bignoniaceae	*Dolichandra unguis-cati*	terrestrial plant		6
483	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Duranta erecta*	terrestrial plant		6
484	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Dysphania ambrosioides*	terrestrial plant		2
485	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Dysphania botrys*	terrestrial plant		7
486	Tracheophyta	Liliopsida	Poales	Poaceae	*Echinochloa crus-galli*	terrestrial plant		6
487	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Eclipta prostrata*	terrestrial plant		8
488	Tracheophyta	Liliopsida	Poales	Poaceae	*Ehrharta erecta*	terrestrial plant		7
489	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Elephantopus tomentosus*	terrestrial plant		7
490	Tracheophyta	Liliopsida	Poales	Poaceae	*Eleusine indica*	terrestrial plant		7
491	Tracheophyta	Liliopsida	Poales	Poaceae	*Eragrostis curvula*	terrestrial plant		8
492	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erechtites hieraciifolia*	terrestrial plant		8
493	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erechtites valerianifolius*	terrestrial plant		2
494	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron annuus*	terrestrial plant		2
495	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron bonariensis*	terrestrial plant		2
496	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron canadensis*	terrestrial plant	Yes	5
497	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron philadelphicus*	terrestrial plant		2

498	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron primulifolius*	terrestrial plant		2
499	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Erigeron sumatrensis*	terrestrial plant	Yes	5
500	Tracheophyta	Magnoliopsida	Apiales	Apiaceae	*Eryngium foetidum*	terrestrial plant		8
501	Tracheophyta	Liliopsida	Zingiberales	Zingiberaceae	*Etlingera elatior*	terrestrial plant		6
502	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Eupatorium cannabinum*	terrestrial plant		2
503	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia antiquorum*	terrestrial plant		8
504	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia cyathophora*	terrestrial plant		2
505	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia dentata*	terrestrial plant		2
506	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia helioscopia*	terrestrial plant		2
507	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia heterophylla*	terrestrial plant		2
508	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia hirta*	terrestrial plant		2
509	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia hypericifolia*	terrestrial plant		2
510	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia maculata*	terrestrial plant		2
511	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia nutans*	terrestrial plant		8
512	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia peplus*	terrestrial plant		2
513	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia prostrata*	terrestrial plant		2
514	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia serpens*	terrestrial plant		2
515	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Euphorbia tirucalli*	terrestrial plant		6
516	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Evolvulus nummularius*	terrestrial plant		2
517	Tracheophyta	Magnoliopsida	Zygophyllales	Zygophyllaceae	*Fagonia schweinfurthii*	terrestrial plant		7
518	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Flaveria bidentis*	terrestrial plant	Yes	5
519	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Gaillardia aristata*	terrestrial plant		7
520	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Gaillardia pulchella*	terrestrial plant		7
521	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Galinsoga parviflora*	terrestrial plant		2
522	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Galinsoga quadriradiata*	terrestrial plant		2
523	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Gaura parviflora*	terrestrial plant		2
524	Tracheophyta	Magnoliopsida	Geraniales	Geraniaceae	*Geranium carolinianum*	terrestrial plant		8
525	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Glebionis carinata*	terrestrial plant		8
526	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Glebionis segetum*	terrestrial plant		7

527	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Gomphrena celosioides*	terrestrial plant		8
528	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Gomphrena globosa*	terrestrial plant		7
529	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Gynura aurantiaca*	terrestrial plant		7
530	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helenium autumnale*	terrestrial plant		7
531	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helenium flexuosum*	terrestrial plant		7
532	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus annuus*	terrestrial plant		7
533	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus argophyllus*	terrestrial plant		7
534	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus atrorubens*	terrestrial plant		7
535	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus debilis* subsp. *cucumerifolius*	terrestrial plant		7
536	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus decapetalus*	terrestrial plant		7
537	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus maxillianii*	terrestrial plant		7
538	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus mollis*	terrestrial plant		7
539	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Helianthus tuberosus*	terrestrial plant		8
540	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Herissantia crispa*	terrestrial plant		2
541	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Hibiscus trionum*	terrestrial plant		2
542	Tracheophyta	Liliopsida	Poales	Poaceae	*Holcus lanatus*	terrestrial plant		6
543	Tracheophyta	Liliopsida	Poales	Poaceae	*Hordeum jubatum*	terrestrial plant		2
544	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Hylocereus undatus*	terrestrial plant		6
545	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Hyptis brevipes*	terrestrial plant		2
546	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Hyptis rhomboidea*	terrestrial plant		2
547	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Hyptis suaveolens*	terrestrial plant		2
548	Tracheophyta	Magnoliopsida	Ericales	Balsaminaceae	*Impatiens balsamina*	terrestrial plant		8
549	Tracheophyta	Magnoliopsida	Ericales	Balsaminaceae	*Impatiens walleriana*	terrestrial plant		8
550	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Indigofera suffruticosa*	terrestrial plant		6
551	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea alba*	terrestrial plant		6
552	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea cairica*	terrestrial plant	Yes	5
553	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea carnea*	terrestrial plant		2
554	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea hederacea*	terrestrial plant		2

555	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea hederifolia*	terrestrial plant		7
556	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea indica*	terrestrial plant		6
557	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea lacunosa*	terrestrial plant		2
558	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea mauritiana*	terrestrial plant		2
559	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea nil*	terrestrial plant		6
560	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea purpurea*	terrestrial plant		6
561	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea quamoclit*	terrestrial plant		7
562	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Ipomoea triloba*	terrestrial plant		2
563	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Jacquemontia tamnifolia*	terrestrial plant		2
564	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Jatropha curcas*	terrestrial plant		7
565	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Lactuca serriola*	terrestrial plant	Yes	5
566	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Lantana camara*	terrestrial plant	Yes	5
567	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Lantana montevidensis*	terrestrial plant		7
568	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Lepidium campestre*	terrestrial plant		2
569	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Lepidium densiflorum*	terrestrial plant		8
570	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Lepidium didymum*	terrestrial plant		2
571	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Lepidium perfoliatum*	terrestrial plant		8
572	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Lepidium virginicum*	terrestrial plant		2
573	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Leucaena leucocephala*	terrestrial plant		2
574	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Leucanthemum maximum*	terrestrial plant		7
575	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Leucanthemum vulgare*	terrestrial plant		2
576	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Liatris spicata*	terrestrial plant		7
577	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium multiflorum*	terrestrial plant		8
578	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium perenne*	terrestrial plant		8
579	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium persicum*	terrestrial plant		8
580	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium remotum*	terrestrial plant		7
581	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium temulentum*	terrestrial plant		2
582	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium temulentum* var. *arvense*	terrestrial plant		8

583	Tracheophyta	Liliopsida	Poales	Poaceae	*Lolium temulentum* var. *longiaristatum*	terrestrial plant		8
584	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Macroptilium atropurpureum*	terrestrial plant		8
585	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Malva verticillata*	terrestrial plant		7
586	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Malvastrum coromandelianum*	terrestrial plant		2
587	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Manihot esculenta*	terrestrial plant		7
588	Tracheophyta	Magnoliopsida	Lamiales	Martyniaceae	*Martynia annua*	terrestrial plant		6
589	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Mecardonia procumbens*	terrestrial plant		2
590	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Medicago polymorpha*	terrestrial plant		8
591	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Medicago sativa*	terrestrial plant		8
592	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Melilotus albus*	terrestrial plant		8
593	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Melilotus indicus*	terrestrial plant		8
594	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Melilotus officinalis*	terrestrial plant		8
595	Tracheophyta	Liliopsida	Poales	Poaceae	*Melinis repens*	terrestrial plant		2
596	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Mentha canadensis*	terrestrial plant		7
597	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Merremia tuberosa*	terrestrial plant		4
598	Tracheophyta	Magnoliopsida	Solanales	Convolvulaceae	*Merremia umbellata*	terrestrial plant		7
599	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Mikania micrantha*	terrestrial plant	Yes	5
600	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa bimucronata*	terrestrial plant	Yes	5
601	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa diplotricha*	terrestrial plant		8
602	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa diplotricha* var. *inermis*	terrestrial plant		8
603	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa invisa*	terrestrial plant		2
604	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa pigra*	terrestrial plant		8
605	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Mimosa pudica*	terrestrial plant		2
606	Tracheophyta	Magnoliopsida	Caryophyllales	Nyctaginaceae	*Mirabilis jalapa*	terrestrial plant		6
607	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Mitracarpus hirtus*	terrestrial plant		2
608	Tracheophyta	Magnoliopsida	Brassicales	Moringaceae	*Moringa oleifera*	terrestrial plant		6
609	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Mussaenda erythrophylla*	terrestrial plant		6
610	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Nicandra physalodes*	terrestrial plant		2

611	Tracheophyta	Liliopsida	Asparagales	Amaryllidaceae	*Nothoscordum gracile*	terrestrial plant		7
612	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Ochrosia elliptica*	terrestrial plant		2
613	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera biennis*	terrestrial plant		8
614	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera drummondii*	terrestrial plant		2
615	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera glazioviana*	terrestrial plant		2
616	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera laciniata*	terrestrial plant		8
617	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera odorata*	terrestrial plant		7
618	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera rosea*	terrestrial plant		2
619	Tracheophyta	Magnoliopsida	Myrtales	Onagraceae	*Oenothera stricta*	terrestrial plant		8
620	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Opuntia cochenillifera*	terrestrial plant		4
621	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Opuntia ficus-indica*	terrestrial plant		2
622	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Opuntia monacantha*	terrestrial plant		6
623	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Opuntia stricta*	terrestrial plant		6
624	Tracheophyta	Magnoliopsida	Caryophyllales	Cactaceae	*Opuntia stricta* var. *dillenii*	terrestrial plant		7
625	Tracheophyta	Magnoliopsida	Lamiales	Orobanchaceae	*Orobanche brassicae*	terrestrial plant		2
626	Tracheophyta	Magnoliopsida	Lamiales	Orobanchaceae	*Orobanche coerulescens*	terrestrial plant		7
627	Tracheophyta	Magnoliopsida	Lamiales	Orobanchaceae	*Orobanche cumana*	terrestrial plant		6
628	Tracheophyta	Magnoliopsida	Oxalidales	Oxalidaceae	*Oxalis articulata*	terrestrial plant		7
629	Tracheophyta	Magnoliopsida	Oxalidales	Oxalidaceae	*Oxalis corniculata*	terrestrial plant		6
630	Tracheophyta	Magnoliopsida	Oxalidales	Oxalidaceae	*Oxalis corymbosa*	terrestrial plant		8
631	Tracheophyta	Magnoliopsida	Oxalidales	Oxalidaceae	*Oxalis latifolia*	terrestrial plant		8
632	Tracheophyta	Magnoliopsida	Caryophyllales	Nyctaginaceae	*Oxybaphus nyctagineus*	terrestrial plant		7
633	Tracheophyta	Liliopsida	Poales	Poaceae	*Panicum maximum*	terrestrial plant		2
634	Tracheophyta	Liliopsida	Poales	Poaceae	*Panicum repens*	terrestrial plant		2
635	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Paraderris elliptica*	terrestrial plant		8
636	Tracheophyta	Liliopsida	Poales	Poaceae	*Parapholis incurva*	terrestrial plant		2
637	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Parthenium argentatum*	terrestrial plant		7
638	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Parthenium hysterophorus*	terrestrial plant	Yes	5
639	Tracheophyta	Magnoliopsida	Vitales	Vitaceae	*Parthenocissus quinquefolia*	terrestrial plant		6

640	Tracheophyta	Liliopsida	Poales	Poaceae	*Paspalum conjugatum*	terrestrial plant		6
641	Tracheophyta	Liliopsida	Poales	Poaceae	*Paspalum dilatatum*	terrestrial plant		2
642	Tracheophyta	Liliopsida	Poales	Poaceae	*Paspalum distichum*	terrestrial plant		2
643	Tracheophyta	Magnoliopsida	Malpighiales	Passifloraceae	*Passiflora caerulea*	terrestrial plant		7
644	Tracheophyta	Magnoliopsida	Malpighiales	Passifloraceae	*Passiflora foetida*	terrestrial plant		2
645	Tracheophyta	Magnoliopsida	Malpighiales	Passifloraceae	*Passiflora suberosa*	terrestrial plant		6
646	Tracheophyta	Liliopsida	Poales	Poaceae	*Pennisetum purpureum*	terrestrial plant		8
647	Tracheophyta	Magnoliopsida	Piperales	Piperaceae	*Peperomia pellucida*	terrestrial plant		8
648	Tracheophyta	Liliopsida	Poales	Poaceae	*Phleum pratense*	terrestrial plant		8
649	Tracheophyta	Magnoliopsida	Malpighiales	Phyllanthaceae	*Phyllanthus amarus*	terrestrial plant		8
650	Tracheophyta	Magnoliopsida	Malpighiales	Phyllanthaceae	*Phyllanthus niruri*	terrestrial plant		8
651	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Physalis angulata*	terrestrial plant		2
652	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Physalis cordata*	terrestrial plant		7
653	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Physalis peruviana*	terrestrial plant		8
654	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Physalis philadelphica*	terrestrial plant		8
655	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Physalis pubescens*	terrestrial plant		7
656	Tracheophyta	Magnoliopsida	Caryophyllales	Phytolaccaceae	*Phytolacca americana*	terrestrial plant	Yes	5
657	Tracheophyta	Magnoliopsida	Caryophyllales	Phytolaccaceae	*Phytolacca dioica*	terrestrial plant		7
658	Tracheophyta	Magnoliopsida	Caryophyllales	Phytolaccaceae	*Phytolacca octandra*	terrestrial plant		7
659	Tracheophyta	Magnoliopsida	Rosales	Urticaceae	*Pilea microphylla*	terrestrial plant		8
660	Tracheophyta	Magnoliopsida	Apiales	Pittosporaceae	*Pittosporum undulatum*	terrestrial plant		4
661	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Plantago lanceolata*	terrestrial plant		6
662	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Plantago virginica*	terrestrial plant		2
663	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Pluchea sagittalis*	terrestrial plant		2
664	Tracheophyta	Liliopsida	Poales	Poaceae	*Poa compressa*	terrestrial plant		8
665	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Porophyllum ruderale*	terrestrial plant		2
666	Tracheophyta	Magnoliopsida	Caryophyllales	Portulacaceae	*Portulaca grandiflora*	terrestrial plant		7
667	Tracheophyta	Magnoliopsida	Caryophyllales	Portulacaceae	*Portulaca pilosa*	terrestrial plant		2
668	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Praxelis clematidea*	terrestrial plant	Yes	5

669	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Pseudelephantopus spicatus*	terrestrial plant	6
670	Tracheophyta	Magnoliopsida	Fabales	Myrtaceae	*Psidium guajava*	terrestrial plant	4
671	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Pyrethrum cinerariifolium*	terrestrial plant	7
672	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Pyrethrum coccineum*	terrestrial plant	7
673	Tracheophyta	Magnoliopsida	Lamiales	Bignoniaceae	*Pyrostegia venusta*	terrestrial plant	7
674	Tracheophyta	Magnoliopsida	Ranunculales	Ranunculaceae	*Ranunculus arvensis*	terrestrial plant	2
675	Tracheophyta	Magnoliopsida	Ranunculales	Ranunculaceae	*Ranunculus marginatus*	terrestrial plant	2
676	Tracheophyta	Magnoliopsida	Ranunculales	Ranunculaceae	*Ranunculus muricatus*	terrestrial plant	2
677	Tracheophyta	Magnoliopsida	Ranunculales	Ranunculaceae	*Ranunculus sardous*	terrestrial plant	7
678	Tracheophyta	Magnoliopsida	Ranunculales	Ranunculaceae	*Ranunculus trachycarpus*	terrestrial plant	7
679	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Rapistrum rugosum*	terrestrial plant	2
680	Tracheophyta	Magnoliopsida	Brassicales	Resedaceae	*Reseda lutea*	terrestrial plant	2
681	Tracheophyta	Magnoliopsida	Sapindales	Anacardiaceae	*Rhus typhina*	terrestrial plant	8
682	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Richardia brasiliensis*	terrestrial plant	2
683	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Richardia scabra*	terrestrial plant	2
684	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	*Ricinus communis*	terrestrial plant	2
685	Tracheophyta	Magnoliopsida	Caryophyllales	Phytolaccaceae	*Rivina humilis*	terrestrial plant	6
686	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Robinia pseudoacacia*	terrestrial plant	2
687	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Rudbeckia hirta*	terrestrial plant	7
688	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Rudbeckia laciniata*	terrestrial plant	7
689	Tracheophyta	Magnoliopsida	Caryophyllales	Polygonaceae	*Rumex acetosella*	terrestrial plant	8
690	Tracheophyta	Magnoliopsida	Caryophyllales	Polygonaceae	*Rumex obtusifolius*	terrestrial plant	6
691	Tracheophyta	Magnoliopsida	Caryophyllales	Amaranthaceae	*Salsola kali*	terrestrial plant	6
692	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Salvia reflexa*	terrestrial plant	7
693	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Salvia tiliifolia*	terrestrial plant	2
694	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sanvitalia procumbens*	terrestrial plant	7
695	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Saponaria officinalis*	terrestrial plant	7
696	Tracheophyta	Magnoliopsida	Asterales	Goodeniaceae	*Scaevola sericea*	terrestrial plant	4
697	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Scoparia dulcis*	terrestrial plant	2

698	Tracheophyta	Liliopsida	Poales	Poaceae	*Secale cereale*	terrestrial plant		8
699	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Senecio vulgaris*	terrestrial plant		8
700	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna alata*	terrestrial plant		7
701	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna bicapsularis*	terrestrial plant		7
702	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna hirsuta*	terrestrial plant		8
703	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna obtusifolia*	terrestrial plant		8
704	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna occidentalis*	terrestrial plant		2
705	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna sophera*	terrestrial plant		8
706	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Senna tora*	terrestrial plant		7
707	Tracheophyta	Liliopsida	Poales	Poaceae	*Setaria palmifolia*	terrestrial plant		8
708	Tracheophyta	Liliopsida	Poales	Poaceae	*Setaria parviflora*	terrestrial plant		8
709	Tracheophyta	Liliopsida	Poales	Poaceae	*Setaria verticillata*	terrestrial plant		4
710	Tracheophyta	Magnoliopsida	Cucurbitales	Cucurbitaceae	*Sicyos angulatus*	terrestrial plant	Yes	5
711	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Sida acuta*	terrestrial plant		8
712	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Sida ovata*	terrestrial plant		7
713	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Sida spinosa*	terrestrial plant		7
714	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Silphium perfoliatum*	terrestrial plant		7
715	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Silybum marianum*	terrestrial plant		8
716	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Sinapis alba*	terrestrial plant		8
717	Tracheophyta	Magnoliopsida	Brassicales	Brassicaceae	*Sinapis arvensis*	terrestrial plant		8
718	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Smallanthus uvedalia*	terrestrial plant		2
719	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum aculeatissimum*	terrestrial plant		2
720	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum americanum*	terrestrial plant		2
721	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum capsicoides*	terrestrial plant		2
722	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum carolinense*	terrestrial plant		7
723	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum chrysotrichum*	terrestrial plant		2
724	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum coagulans*	terrestrial plant		7
725	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum elaeagnifolium*	terrestrial plant		2
726	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum erianthum*	terrestrial plant		2

727	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum rostratum*	terrestrial plant	Yes	5
728	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum sarachoides*	terrestrial plant		7
729	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum sisymbriifolium*	terrestrial plant		6
730	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum torvum*	terrestrial plant		2
731	Tracheophyta	Magnoliopsida	Solanales	Solanaceae	*Solanum virginianum*	terrestrial plant		7
732	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Solidago canadensis*	terrestrial plant	Yes	5
733	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Soliva anthemifolia*	terrestrial plant		8
734	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Soliva pterosperma*	terrestrial plant		2
735	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sonchus arvensis*	terrestrial plant		2
736	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sonchus asper*	terrestrial plant		8
737	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sonchus oleraceus*	terrestrial plant		8
738	Tracheophyta	Magnoliopsida	Myrtales	Lythraceae	*Sonneratia apetala*	terrestrial plant		7
739	Tracheophyta	Liliopsida	Poales	Poaceae	*Sorghum halepense*	terrestrial plant	Yes	5
740	Tracheophyta	Liliopsida	Poales	Poaceae	*Sorghum sudanense*	terrestrial plant		7
741	Tracheophyta	Liliopsida	Poales	Poaceae	*Spartina alterniflora*	terrestrial plant	Yes	5
742	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Spergula arvensis*	terrestrial plant		8
743	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Spermacoce alata*	terrestrial plant		2
744	Tracheophyta	Magnoliopsida	Gentianales	Rubiaceae	*Spermacoce remota*	terrestrial plant		2
745	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sphagneticola calendulacea*	terrestrial plant		7
746	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Sphagneticola trilobata*	terrestrial plant		2
747	Tracheophyta	Liliopsida	Poales	Poaceae	*Sporobolus pyramidatus*	terrestrial plant		7
748	Tracheophyta	Magnoliopsida	Lamiales	Lamiaceae	*Stachys arvensis*	terrestrial plant		8
749	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Stachytarpheta jamaicensis*	terrestrial plant		2
750	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Stachytarpheta urticaefolia*	terrestrial plant		2
751	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Stellaria pallida*	terrestrial plant		8
752	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Stemodia verticillata*	terrestrial plant		2
753	Tracheophyta	Magnoliopsida	Lamiales	Orobanchaceae	*Striga asiatica*	terrestrial plant		4
754	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Symphyotrichum subulatum*	terrestrial plant		2
755	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Synedrella nodiflora*	terrestrial plant		2

756	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tagetes erecta*	terrestrial plant	6
757	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tagetes lucida*	terrestrial plant	7
758	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tagetes minuta*	terrestrial plant	2
759	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tagetes tenuifolia*	terrestrial plant	7
760	Tracheophyta	Magnoliopsida	Caryophyllales	Talinaceae	*Talinum paniculatum*	terrestrial plant	8
761	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Taraxacum officinale*	terrestrial plant	8
762	Tracheophyta	Magnoliopsida	Brassicales	Cleomaceae	*Tarenaya hassleriana*	terrestrial plant	7
763	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Tephrosia candida*	terrestrial plant	6
764	Tracheophyta	Magnoliopsida	Caryophyllales	Aizoaceae	*Tetragonia tetragonoides*	terrestrial plant	7
765	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tithonia diversifolia*	terrestrial plant	2
766	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tithonia rotundifolia*	terrestrial plant	6
767	Tracheophyta	Liliopsida	Commelinales	Commelinaceae	*Tradescantia pallida*	terrestrial plant	7
768	Tracheophyta	Liliopsida	Commelinales	Commelinaceae	*Tradescantia spathacea*	terrestrial plant	6
769	Tracheophyta	Liliopsida	Commelinales	Commelinaceae	*Tradescantia zebrina*	terrestrial plant	7
770	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tragopogon dubius*	terrestrial plant	2
771	Tracheophyta	Magnoliopsida	Boraginales	Boraginaceae	*Trichodesma indicum*	terrestrial plant	7
772	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Tridax procumbens*	terrestrial plant	2
773	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Trifolium hybridum*	terrestrial plant	8
774	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Trifolium incarnatum*	terrestrial plant	8
775	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Trifolium pratense*	terrestrial plant	2
776	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Trifolium repens*	terrestrial plant	2
777	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Ulex europaeus*	terrestrial plant	4
778	Tracheophyta	Liliopsida	Poales	Poaceae	*Urochloa maxima*	terrestrial plant	4
779	Tracheophyta	Magnoliopsida	Caryophyllales	Caryophyllaceae	*Vaccaria hispanica*	terrestrial plant	8
780	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Vachellia farnesiana*	terrestrial plant	2
781	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Verbena bracteata*	terrestrial plant	7
782	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Verbena brasiliensis*	terrestrial plant	7
783	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Verbena litoralis*	terrestrial plant	7
784	Tracheophyta	Magnoliopsida	Lamiales	Verbenaceae	*Verbena officinalis*	terrestrial plant	7

785	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Veronica arvensis*	terrestrial plant		8
786	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Veronica hederifolia*	terrestrial plant		8
787	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Veronica peregrina*	terrestrial plant		8
788	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Veronica persica*	terrestrial plant		2
789	Tracheophyta	Magnoliopsida	Lamiales	Plantaginaceae	*Veronica polita*	terrestrial plant		8
790	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Vicia sativa* subsp. *nigra*	terrestrial plant		7
791	Tracheophyta	Magnoliopsida	Fabales	Fabaceae	*Vicia villosa*	terrestrial plant		8
792	Tracheophyta	Magnoliopsida	Gentianales	Apocynaceae	*Voacanga africana*	terrestrial plant		2
793	Tracheophyta	Magnoliopsida	Malvales	Malvaceae	*Waltheria indica*	terrestrial plant		2
794	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xanthium chinense*	terrestrial plant		2
795	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xanthium italicum*	terrestrial plant		2
796	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xanthium pennsylvanicum*	terrestrial plant		7
797	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xanthium spinosum*	terrestrial plant	Yes	5
798	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xanthium strumarium*	terrestrial plant		7
799	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Xerochrysum bracteatum*	terrestrial plant		7
800	Tracheophyta	Liliopsida	Asparagales	Amaryllidaceae	*Zephyranthes candida*	terrestrial plant		8
801	Tracheophyta	Liliopsida	Asparagales	Amaryllidaceae	*Zephyranthes carinata*	terrestrial plant		8
802	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	*Zinnia peruviana*	terrestrial plant		8

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