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Knowledge and perception of university undergraduate students about invasive alien species

Conocimiento y percepción de estudiantes de pregrado sobre especies exóticas invasoras

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Abstract. The pet trade often introduces invasive alien species (IAS), causing harmful effects on native species. Additionally, limited awareness of the origins and impacts of IAS prevails among the public. This study aims to assess the knowledge and perceptions of university students regarding exotic species and the factors motivating the acquisition of exotic pets. To achieve this, an online survey was conducted among undergraduate students. From the surveyed group, 84% recognized IAS. However, misconceptions persisted, with 58.6% wrongly identifying IAS as native. The survey findings also revealed that social media motivate exotic pet ownership. Interestingly, while some IAS were perceived with tenderness and deemed deserving of legal protection, others were considered unsuitable for presence in Chilean ecosystems. Overall, the study underscores the significance of promoting awareness regarding IAS, their effects, and responsible exotic pet ownership to protect the fragile equilibrium of Chilean ecosystems.

Keywords. Exotic pet, invasive alien species, impact, native species, social networks, survey

Resumen. El comercio de animales de compañía introduce a menudo especies exóticas invasoras (EEI) que causan efectos nocivos en las especies autóctonas. Además, el público tiene un conocimiento limitado de los orígenes e impactos de las EEI. Este estudio pretende evaluar los conocimientos y percepciones de los estudiantes universitarios sobre las especies exóticas y los factores que motivan la adquisición de mascotas exóticas. Para ello, se realizó una encuesta en línea entre estudiantes universitarios. Del grupo encuestado, el 84% reconoció las EEI. Sin embargo, persistían los conceptos erróneos, ya que el 58,6% identificaba erróneamente las EEI como autóctonas. Los resultados de la encuesta también revelaron que las redes sociales motivan la tenencia de mascotas exóticas. Curiosamente, mientras que algunas EEI fueron percibidas con ternura y consideradas merecedoras de protección legal, otras fueron consideradas inadecuadas para su presencia en los ecosistemas chilenos. En general, el estudio subraya la importancia de promover la concienciación sobre las EEI, sus efectos y la tenencia responsable de mascotas exóticas para proteger el frágil equilibrio de los ecosistemas chilenos.

Palabras clave. Mascotas exóticas, especies exóticas invasoras, impacto, especies nativas, redes sociales, encuesta.

1. Introducción

An invasive alien species (IAS) is an organism that causes ecological or economic damage in a new environment to which it is not native [1]. IAS are opportunistic and manage to adapt easily to new habitats, allowing a rapid increase in their population [2]. Other characteristics include rapid reproduction and the ability to outcompete local species for food, water, and space. IAS constitute one of the main causes of biodiversity loss worldwide, leading to the decline or even extinction of native species and affecting ecosystems [3]. IAS can be animals, plants, fungi, or microorganisms that spread accidentally or intentionally beyond their natural geographic range [4].

The Ministry of Environment of Chile defines intentional introduction as a transport mechanism associated with human activities involving animals for domestic use, livestock, aquaculture, organic materials such as honey and fruits, and

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species introduced for biological pest control [5]. Conversely, accidental introduction occurs when biogeographic barriers are breached, for example, when species attach to and are transported by any type of aquatic, terrestrial, or aerial vessel, or when seeds are introduced or carried by travelers on clothing, luggage, or bicycles [6].

In Chile, the introduction of exotic flora and fauna IAS has been ongoing with various intentions. In the case of plants, this includes forestry, medicinal, and ornamental uses [7], [8]. The introduction of fauna has been mainly for food or production purposes, such as rabbits (*Oryctolagus cuniculus*) and beavers (*Castor canadensis*) in Tierra del Fuego, Argentina, which have now spread to Chile [9]. The impacts generated by these IAS have been quantified at ecological, economic, and social levels [10]. Ecologically, beavers are a prime example, as they modify landscapes and alter nutrient cycles and aquatic food webs. Economically, losses of over 93,428,455 USD have been estimated over a 20-year projection due to the impact on agriculture by species like rabbits (*Oryctolagus cuniculus*) [10].

Other harmful effects of IAS include the transmission of diseases or acting as reservoirs of pathogens that can affect native species [11]. Humans are responsible for the introduction of IAS and for creating conditions that facilitate their rapid dissemination; therefore, they are also responsible for implementing measures to control them [12].

Among these measures, education plays a fundamental role, as many biological invasions result from a general lack of knowledge about managing exotic species and the mistaken belief that releasing fauna into the wild is acceptable. This assumption often leads to exotic species initially kept as pets becoming invasive. Thus, educating about responsible pet ownership is crucial in preventing biological invasions.

"The public's general perception of species is more closely tied to emotion than to an understanding of the species' role in the ecosystem. As a result, the management of invasive species should be approached from a sociological perspective that facilitates a comprehensive understanding of all human dimensions" [13], [14]. Perceptions of invasive species, awareness levels, and knowledge about alien and native species vary among distinct groups of people. This understanding and perception are often shaped by social networks, with a more pronounced influence observed among younger populations [15].

The main objective of this study was to assess the knowledge and perception of students at the University of San Sebastián regarding the effects of introduced exotic species and their level of knowledge about native species. To achieve this, four specific objectives were established: 1) estimate the level of knowledge among the university population about invasive alien species (IAS) and native species, 2) identify which IAS the university population tends to confuse with native species, 3) evaluate the impact of media dissemination on the perception of IAS, and 4) analyze the perception and knowledge of the impact of IAS on ecosystems.

2. Materials and methods

2.1 Sample population

The study was carried out using an online survey administered to undergraduate students at Universidad San Sebastián during January, February, March, and April 2023. To define the study population, the sample size was calculated using the finite universe formula, with a population of 11,154 students enrolled for the year 2022, at a 95% confidence level with a Z value of 1.96, resulting in a sample size of 372 students.

2.2 Pilot survey and validation

A pilot test was carried out with 10 randomly selected people to identify any problems in the wording or comprehension of the questions. The average response time was estimated at 7 minutes. After the survey was completed, the responses were analyzed for consistency with the questions. Questions that were poorly formulated, difficult to understand, or did not yield relevant information were eliminated and replaced with better-worded ones. Subsequently, the survey was sent to three conservation and wildlife professionals with extensive knowledge of invasive and native exotic species to ensure the quality of the data collection instrument and its alignment with the objective of the study. The comments of the experts were accepted, and the final survey was published.

2.3 Survey Structure

An Outlook form was used for data collection (see supplementary data) which was shared with students through the dissemination of social networks including Instagram, WhatsApp, Facebook, QR code and the University's institutional email. The survey had a section corresponding to the informed consent where it is established as an inclusion criterion to be over 18 years old, and the interviewee's background (name, career, age) is recorded. The total number of questions in the questionnaire was 25, of which two were Likert scale questions, one was an open question and the remaining 22 were alternative selection questions. To answer the first specific objective, the data obtained from questions 4, 5, 6, 7 and 9 were used (see Appendix). The second specific objective was answered with questions

11,12,13,14,15,16,17,18 and 19. The third objective was evaluated with the data from questions 10,23 and 24. The choice of IAS and native species in the questionnaire was based on characteristics such as "umbrella" species in the case of *Leopardus guigna* and *Puma concolor*, an endangered species according to species classification regulations and that can be confused as a pet in the case of the *Chinchilla chinchilla*, in the case of native species. For the IAS, we chose those that are most popular and have had a significant impact on the ecosystem.

2.4 Data analysis

Data from the online surveys were backed up in an Excel file. Descriptive statistics were used for data analysis.

3. Results and discussion

This study presents the results of a survey on the knowledge and perception of invasive alien species (IAS) among undergraduate students at Universidad San Sebastián. A total of 379 students participated in the survey. Veterinary Medicine had the highest number of participants, with 130 students. This was followed by Psychology with 60 responses, and Medicine with 32 responses. The careers with the least interest in responding were Social Work, Architecture, and Bachelor's Degrees in Humanities and Social Sciences. The survey saw greater participation from Veterinary Medicine students, likely due to their familiarity with the subject.

3.1 Level of knowledge of the university population about invasive alien species (IAS) and native species

When questions 5 and 6 of the form were analyzed (see Appendix), a total of 319 respondents answered yes to knowing what an IAS is, while 60 people responded that they did not know. Of those who responded that they did know what an IAS is, 125 belonged to Veterinary Medicine (33%), 49 to Psychology (15%), 29 to Medicine (9%), and the rest were divided among other fields. When asked about their knowledge of native species, 371 respondents answered yes, while 8 people did not know what a native species is. Of those who responded that they did know what a native species is, 127 were from the Veterinary Medicine program (34%). To corroborate the level of knowledge about IAS and native species, questions 11 to 19 were asked to contrast the results obtained and to identify if any native species were confused with IAS or vice versa.

3.2 Identify which IAS is/are the most confused by the university population as a native species

Among the IAS species that the university population confuses with native species are the European bumblebee and the blackberry. When conducting a general survey of the level of knowledge about IAS for the five species surveyed (one plant and four animals), 50% of those interviewed were able to correctly identify the species observed in the image. On the other hand, the species most frequently identified as IAS were the beaver, followed by the wild boar and the mink. The percentage of respondents who confused IAS with native species was 32.7% (table 1).

Table 1. Contingency table to assess students' knowledge of different IAS, four animal species and one plant

Specie	IAS	Native	Unknown	TOTAL
Wild boar (*Sus scrofa*)	188	58	73	319
Beaver (*Castor canadensis*)	225	50	44	319
Mink (*Neovison vison*)	189	83	47	319
Blackberry (*Rubus fruticosus*)	130	144	45	319
European Bumblebee (*Bombus terrestris*)	75	187	57	319
TOTAL	807 (50,6%)	522 (32,7%)	266 (16,7%)	**1595**

When evaluating whether the student population had the same level of knowledge about native species as they did about IAS, it was found that 60.2% of the interviewees were able to identify native species, with the most recognized being the puma, the guiña, and the chinchilla. However, in the case of the avellanita, respondents did not know if it was native or IAS (table 2).

Table 2. Contingency table to assess students' knowledge of different IAS, four animal species and one plant

Specie	Kodkod (*Leopardus guigna*)	Chinchilla (*Chinchilla chinchilla*)	Cougar (*Puma concolor*)	Avellanita (*Avellanita bustillosii*)	TOTAL
IAS	75	83	17	84	259 (17,5%)
Native	257	247	343	47	894 (60,2%)
Unknown	39	41	11	240	331 (22,3%)
TOTAL	371	371	371	371	**1484**

Key findings indicate that most undergraduate students at Universidad San Sebastián believe they understand what invasive alien species (IAS) and native species are. However, when this knowledge was tested using photographs, their level of understanding decreased. Additionally, some IAS were mistaken for native species and vice versa. This heightened recognition of exotic species over native ones may be attributed to the naturalization process of these species [16], [17]. This phenomenon becomes particularly evident when exotic species have been introduced to a new habitat for an extended period. Consequently, naturalized species are more easily identifiable by people, even when they are not originally native to the region [18], [19]. Similar results were reported in a study conducted in Brazil, where the perception and knowledge of students about IAS and native species was evaluated, where students presented a greater knowledge about exotic species than native species [20]. The study [21] report a similar perception of alien species by people, who identified 13 alien species as native. The authors attribute this result to the physical features of some species and the limited taxonomic knowledge of the species [21]. In the present study, it was possible to identify in the student population that there is little knowledge about native plant species, as the avellanita (*Avellanita bustillosii*) was not identified. These results are consistent with the study conducted by [22] in Argentina, where respondents were unable to differentiate between native and invasive flora species. Sosa and collaborators argue that this may be a consequence of a lack of communication between the scientific community and educators from school to university, to generate environmental awareness in people [22]. Among the native species, the most correctly identified was the puma (*Puma concolor*), this is attributable to several characteristics of the species, such as its size, conservation efforts and because it is also involved in attacks on domestic livestock, generating conflicts with ranchers [23], [24].

3.3 Evaluate the effect of the media on the perception of IAS

To evaluate the impact of the media on the perception of IAS, the first step was to assess the knowledge and ownership of exotic species as pets. When respondents were asked (question 7 of Appendix) if they had had or have an exotic pet, 103 said yes (27%), 264 said they had not had or do not have one (70%) and 12 people responded that they did not know about the question (3%) (Figure 3).

When respondents were asked about owning an exotic pet, 165 answered affirmatively, while 142 said they would not (see question 9, Appendix 2). Regarding the influence of social networks, 235 students agreed that social networks motivate people to acquire exotic pets, 120 disagreed, and 24 were unsure (see question 23, Appendix 2) (figure 1a). Instagram and YouTube were identified as the primary sources of information about exotic species (figure 1b).

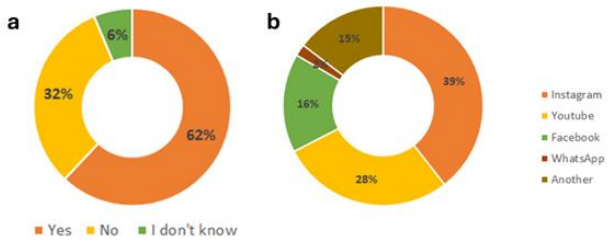

Figure 1. Effect of social networks on exotic pet ownership. (a) Percentage of people who are motivated to get an exotic pet by the influence of social networks. (b) Social networks where information on exotic pets identified by users is shared.

The case of an IAS, the red-eared slider turtle, which was originally kept as a pet in Chile, was used to evaluate the students' perception of this type of species and the decisions they would make if they were unable to take care of this type of pet (see question 21, annex 2). Of those surveyed, 223 (43%) responded that they would give it up for adoption, 194 (38%) would give it to a zoo, 19 (4%) would sell it, 28 (5%) would release it into the wild and 49 (10%) would choose another option.

It was identified in the present study that more than half of the respondents felt influenced by social networks to get exotic animals as pets, being the social network Instagram the one with more related material shared, according to the surveyed students. The tendency to have exotic pets among students is 27%, with mammals being the most preferred, followed by birds, reptiles and in lower percentage fish. Globally, the tendency to have exotic animals as pets is increasing, being one of the causes of biological invasions [25], [26]. Studies have also reported that social networks are responsible for motivating people to have exotic pets, which is consistent with what the students in the present study stated [27]. Among the reptiles kept as pets, the most common is the red-eared slider turtle (*Trachemys scripta*), which coincided with an example used in question 21, about the fate of this pet if the owner could no longer take care of it. In this case, students mostly responded that they would give it up for adoption and a small percentage responded that they would choose to release it into the wild. This last option is what leads to exotic animals becoming IAS and, although in a lower percentage, the idea that releasing animals into the wild, regardless of their origin and type of habitat, is good, is still maintained [28], [29].

3.4 Analyze the perception and knowledge of the impact of IAS on ecosystems

To evaluate whether the student population in general had some level of knowledge about the impacts of IAS on ecosystems, question 10 (Appendix) was asked. A total of 289 (76%) students responded that they knew or had heard about the impacts, and 90 (24%) responded that they had no knowledge. After this question, an image of the impact generated by the beaver was shown with three response options about the main responsible for this damage. Ninety-eight percent of the students interviewed correctly associated the damage generated with the IAS species that caused it, which in this case is the beaver (*Castor canadensis*).

The questionnaire included two Likert scale questions to determine the level of agreement or disagreement with statements related to IAS, the emotions they evoke, and their ownership as pets. Initially, students' perceptions of three invasive species (beaver, mink, wild boar) were evaluated, using a scale of 1 (disagree) to 5 (completely agree). These species elicited feelings of tenderness in 50.3% of respondents, 24.7% believed they play an important role in Chile's ecosystem, 73.5% disagreed with the idea that these species should be hunted, and 57.4% felt they should not be present in Chile (figure 2).

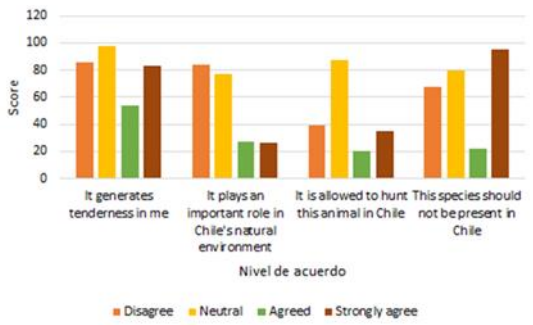

Figure 2. Likert scale results to assess student perception of IAS.

With respect to IAS, the present study showed that the beaver was the animal most identified by the students, both as an IAS and for its negative effects on the ecosystem. One reason this species was more easily identified compared to other IAS in the survey could be its well-documented history since its introduction in 1946 in Tierra del Fuego. It has since spread across Argentine and Chilean lands, causing devastating impacts on the ecosystem. This has resulted in various efforts to control the species [30]. Media coverage of this species has been more relevant compared to other IAS, in addition to financial support for its control through GEF projects [31], [32].

Next, respondents were asked about the Argentine parrot (*Myiopsitta monachus*), presenting several statements on the same scale of agreement or disagreement. Out of 371 responses for each statement, 58% strongly disagreed with the statement "I would like to have one as a pet," 14% disagreed, and 9% strongly agreed. For the statement "as a pet, it is easy to take care of," 48% strongly disagreed, 24% disagreed, and 4% thought it was easy to care for a pet like the parrot. Regarding the statement "it can be free in Chilean ecosystems," 50% strongly disagreed, 19% disagreed, and 7% strongly agreed. Despite these results, a significant number of respondents (32%) strongly agreed that it is a species that needs to be protected by Chilean law, while a smaller percentage (20%) completely disagreed with this notion (figure 3).

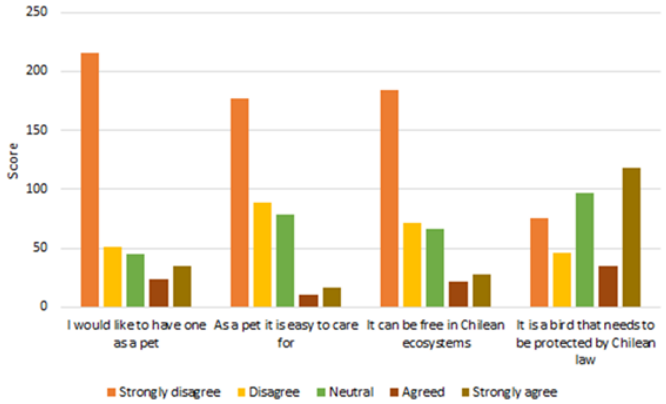

Figure 3. Likert scale describing the level of agreement or disagreement on the perception of an Argentine Parakeet (*Myiopsitta monachus*).

Some of the IAS given as examples, where the beaver was also included, managed to generate tenderness in the respondents and a high percentage of students also considered that they should not be hunted. Regarding the Argentine parrot, a significant percentage of students expressed strong disagreement about having it as a pet, while a notable proportion also believed it should be protected by Chilean law. These responses reveal some contradictions, likely due to the general population's lack of knowledge about the management of IAS in the country, as well as people's preferences for certain species, which may be influenced by physical stereotypes [33]. These results present in this article suggest that although there is a certain degree of knowledge about IAS in the student population, there is an influence of social networks on the perception of IAS. The results may also be conditioned by a greater number of participants belonging to the veterinary medicine career, despite the wide dissemination among students of all careers. This may indicate little interest of the general population in topics related to the environment

and the conservation of species and ecosystems, so it is relevant to reinforce education programs to generate environmental awareness among citizens in training.

4. Conclusions

Most of the students surveyed from Universidad San Sebastián, Concepción campus, have a general knowledge of IAS. However, the European bumblebee was confused as a native species. The perception of students about these species is very variable, for some IAS they can arouse tenderness, consider that they are species in need of legal protection by the government, there is also a high level of agreement that some of these should not be present in national territories. Social networks influence the perception that students have about IAS and the possession of these as pets, with Instagram being the social network that shares the most content about these species. Greater education on the subject would greatly enhance students' knowledge, which would help in the identification of these species, the protection of native species and knowledge of their various effects on the ecosystem.

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CONFLICT OF INTEREST

The authors have no conflicts of interest.

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APPENDIXES

1. Survey format conducted among students at Universidad San Sebastián to assess their knowledge and perception of invasive alien species.

Knowledge and perception survey on invasive alien species

Instructions: You have been invited to participate in the survey "Knowledge and perception of students about the effects of introduced exotic species", Universidad San Sebastián, Concepción campus. It is important to mention that by agreeing to answer the following survey you will be accepting that the information obtained in these instruments will be used for academic, research or other purposes. The information obtained from this research will allow us to take actions focused on addressing the misinformation about these species and thus join efforts to prevent and control Invasive Alien Species (IAS). The potential benefit of the research is to socially evaluate the knowledge and perception of students in relation to IAS. The confidentiality of the personal data recorded in the form will be maintained. You must be over 18 years of age to answer the survey. The average response time is 7 minutes.

*Not optional.

Question 01:
Do you agree to participate in the survey? *
- o Yes.
- o No.

Question 02:
Name and lastname *
_____

Question 03:
Age *
_____

Question 04:
What career do you belong to?
- o Law Degree.
- o Social Work.
- o Commercial engineering.
- o Public Administration.
- o Nursing.
- o Nutrition.
- o Obstetrics.
- o Medicine.
- o Engineering Careers (Civil, Mining, Industrial, Computer Science).
- o Architecture.
- o Digital Animation.
- o Dentistry.
- o Kinesiology.
- o Phonoaudiology.
- o Occupational Therapy.
- o Pedagogy Careers (Differential, Physical Education, English).
- o Veterinary Medicine.
- o Energy and Environmental Sustainability Engineer.
- o Psychology.
- o Bachelor's Degree in Humanities and Social Sciences.
- o Chemistry and Pharmacy.

Question 05:
Do you know what an introduced alien species is? *
- o Yes.
- o No.

Question 06:
Do you know what a native species is? *
- o Yes.
- o No.

Question 07:
Have you had or do you have an exotic pet (animal)? *
- o Yes.
- o No.
- o I don't know.

Question 08:
If the above answer was Yes, please indicate which one:
_____

Question 09:
Would you have an exotic pet (animal)? *
- Yes.
- No.
- I don't know.

Question 10:
Have you ever heard or read about the effects of invasive alien species on the environment? *
- Yes.
- No.
- I don't know.

Question 11:
From this photo could you identify whether it is an invasive alien species or a native species? *

Figure 4: Image from question 11.
Source: https://www.freepik.es/foto-gratis/jabalies-naturaleza_13529469.htm#query=jabali&position=3&from_view=keyword&track=sph&uuid=673b5f68-9eb0-46fe-a485-955d160705aa
- Invasive alien species.
- Native species.
- I don't know.

Question 12:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 5: Image from question 12.
Source: https://images.app.goo.gl/b5uuEyCegt2h51Sq9
- Invasive alien species.
- Native species.
- I don't know.

Question 13:
Through this photo could you identify if it is an invasive alien species or a native species?

Figure 6: Image from question 13.
Source: https://images.app.goo.gl/pEj3wkmb2kmavzMz5
- Invasive alien species.
- Native species.
- I don't know.

Question 14:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 7: Image from question 14.
Source:https://commons.wikimedia.org/wiki/File:MinkforWiki.jpg#/media/Archivo:MinkforWiki.jpg

- Invasive alien species.
- Native species.
- I don't know.

Question 15:
From this photo could you identify whether it is an invasive alien species or a native species?

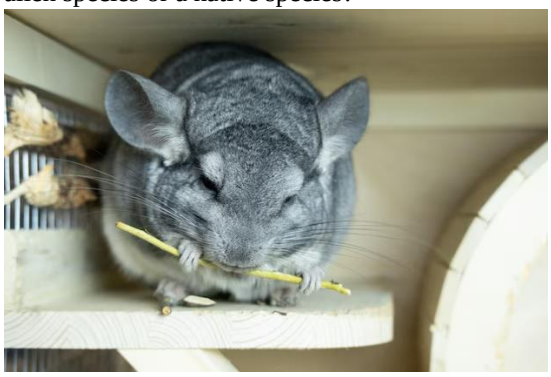

Figure 8: Image from question 15.
Source: https://images.app.goo.gl/rXf1NdNzCFbgtNcG6

- Invasive alien species.
- Native species.
- I don't know.

Question 16:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 9: Image from question 16.
Source: https://images.app.goo.gl/eKUi9h7ciXSBVtBS6

- Invasive alien species.
- Native species.
- I don't know.

Question 17:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 10: Image from question 17.
Source: https://pixabay.com/es/photos/zarzamora-bayas-negro-mora-899070/

- Invasive alien species.
- Native species.
- I don't know.

Question 18:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 11: Image from question 18.
Source: https://www.ecured.cu/Archivo:Avellanita.jpg

- Invasive alien species.
- Native species.
- I don't know.

Question 19:
From this photo could you identify whether it is an invasive alien species or a native species?

Figure 12: Image from question 19.

- Invasive alien species.
- Native species.
- I don't know.

Question 20:
According to this image where multiple tree cuts are observed, in addition to a formation of "dike" which is a construction to prevent the passage of water. Which animal do you think could have caused this environmental disaster?

Figure 13: Image from question 20.
Source:https://commons.wikimedia.org/wiki/File:Beaver_dam_in_Tierra_del_Fuego,_Chile.jpg

- Beaver.
- Rabbit.
- Mouse.

Question 21:
If you have as a pet, for example, the red-eared slider turtle in the image, and you could no longer keep it, what would you do with it?

Figure 14: Image from question 21.
Source:https://commons.wikimedia.org/wiki/File:Red_Eared_Slider_Image_001.jpg

- Placing for adoption to another person.
- I sell it.
- I release it to nature.
- I deliver it to a zoo.
- Another.

Question 22:
Look at these images and answer how much you agree or disagree with the following statements, with 1 being disagree and 5 being completely agree.

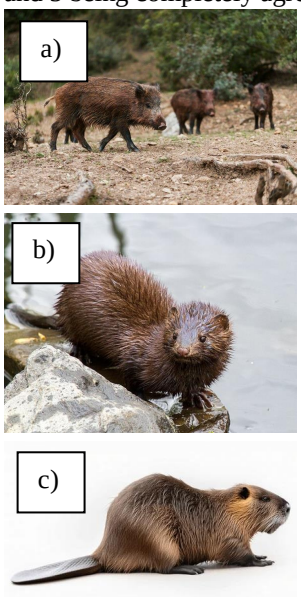

Figure 15: Images from question 22.
Sources:
a)https://www.freepik.es/foto-gratis/jabalies-naturaleza_13529469.htm#query=jabali&position=3&from_view=keyword&track=sph&uuid=673b5f68-9eb0-46fe-a485-955d160705aa
b)https://commons.wikimedia.org/wiki/File:MinkforWiki.jpg#/media/Archivo:MinkforWiki.jpg
c)https://images.app.goo.gl/b5uuEyCegt2h51Sq9

	1	2	3	4	5
It generates tenderness in me					
It plays an important role in Chile's natural environment					
It is allowed to hunt this animal in Chile					
This species should not be present in Chile					

Question 23:
Do you think social media motivates you to get, adopt or buy an exotic pet?
- Yes.
- No.
- I don´t know.

Question 24:
In which of these social networks have you seen information shared about exotic species such as parrots, jaguars, snakes, etc? You can select more than one option.
- Youtube
- Instagram
- Facebook
- WhatsApp
- Another

Question 25:
Please answer on a scale of 1 to 5 the level of your perception of the following statements about the Argentine parrot, with 1 being disagree and 5 being completely agree.

Figure 16: Image from question 25.
Source: https://pixabay.com/es/photos/cotorra-cotorra-argentina-p%C3%A1jaro-1975226/

	1	2	3	4	5
I would like to have one as a pet					
As a pet it is easy to care for					
It can be free in Chilean ecosystems					
It is a bird thatneeds to be protected byChilean law					