

***Neurergus kaiseri*: the Practicality of Endangered Species  
Conservation through Economic Efficiency and International Law**

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**Introduction**

Countless reptile and amphibian species are threatened with extinction due to climate change, pollution, the introduction of invasive species, human consumption, the wildlife parts trade, and habitat destruction amongst others, in the array of contemporary threats to biodiversity. Unfortunately, the effect of these threats is to increase the demand for these species amongst private collectors, driving prices up, and exacerbating extant threats to species survival by incentivizing the harvesting of live stocks.<sup>1</sup> *Neurergus kaiseri*, the Lorestan Newt,<sup>2</sup> endemic to four streams in southwest Iran, provides a telling case study for this all-too ubiquitous fact pattern. In 2001 the total mature population was estimated to be less than 1,000 individuals,<sup>3</sup> though some suggest this figure was a significant over-estimate.<sup>4</sup> Since 2005 this species has been collected in significant numbers for export to the North American, European, and Japanese pet trades, apparently despite protection from the Iranian Department of the Environment.<sup>5</sup> Ostensibly all funneled through one dealer in the Ukraine,<sup>6</sup> if the numbers the dealer claims to have been able to supply are accurate<sup>7</sup> (which corresponds with anecdotal observation of the North American pet market)<sup>8</sup> more than half of the 2001 population estimate has subsequently been harvested for the pet trade. Though new stream populations of the species have been discovered recently,<sup>9</sup> the population estimate has not increased,<sup>10</sup> and is estimated to be as low as 200 mature individuals.<sup>11</sup>

This paper will examine, using *kaiseri* as a case study for similarly situated species, the potential for international law to address the over-collection of wild populations of reptiles and

amphibians already pressured with extinction for the pet trade in Northern nations. Particular emphasis will be placed on the ability of the United States to enact legislation that constrains trade in wild-caught specimens domestically, as the United States is the largest consumer of live reptiles for the pet trade, importing 2.5 million reptiles alone annually.<sup>12</sup>

### ***Neurergus kaiseri* as a Case Study**

*Neurergus kaiseri* is a small newt “with a long narrow yellow or orange-red dorsal stripe . . . overlaying bleached white (spots or continuous bands) on a black background,”<sup>13</sup> that reaches a maximum length of 131 mm.<sup>14</sup> The species breeds throughout the year<sup>15</sup> in four clear freshwater streams in Lorestan Province, southern Zagros Mountains, Iran,<sup>16</sup> and lives the rest of the year terrestrially in oak-pistachio open woodlands<sup>17</sup> within 150 yards of the water.<sup>18</sup> “[P]opulations of the species are severely fragmented,”<sup>19</sup> and occur across a total area of occupancy of less than 10km<sup>2</sup>.<sup>20</sup> Conflicting reports exist as to whether these streams are subject to pollution,<sup>21</sup> though the only exposure to human activity is purportedly occasional subsistence use and occupancy by nomads.<sup>22</sup> The recent introduction of invasive predatory fish,<sup>23</sup> as well as water level reductions due to recent drought,<sup>24</sup> has reduced the viability of stream breeding sites.<sup>25</sup> “[I]n recent years it has become extremely rare to observe this [species] in the wild.”<sup>26</sup>

There is one operative captive breeding program of this species in a North American zoo,<sup>27</sup> the Sedgwick County Zoo in Wichita, Kansas,<sup>28</sup> and the creation of an in-situ captive breeding program in Iran is being discussed.<sup>29</sup> Sedgwick County Zoo has had good success acclimating and reproducing the species, having produced more than 3,000 offspring within the past four years.<sup>30</sup> Though captive reproduction in the pet trade was irregular in the past,<sup>31</sup> it has become increasingly common since 2005,<sup>32</sup> with captive-bred specimens currently advertised for sale in the U.S. on an internet message board for newt and salamander enthusiasts.<sup>33</sup> Over that

time the market price for the species has significantly dropped; retail offerings in 2005 were more than \$330 per newt,<sup>34</sup> while newts are currently available for “a new low”<sup>35</sup> of \$65 each.<sup>36</sup>

### **Practical Issues with Enforcement**

Presently *Neurergus kaiseri* is only protected by Iranian domestic law,<sup>37</sup> a fact presented as a selling point by the Ukrainian dealer<sup>38</sup> that apparently supplies most of the wild-collected *kaiseri* to pet-trade distributors in Northern nations.<sup>39</sup> Theoretically, this Iranian law would serve as a basis for prosecutions under the Lacey Act here in the United States.<sup>40</sup>

Generally, the Lacey Act operates by providing a basis for forfeiture of illegally obtained specimens,<sup>41</sup> and in some cases civil<sup>42</sup> or criminal prosecutions,<sup>43</sup> for the “import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law.”<sup>44</sup> The ability to incorporate foreign laws as the basis for the underlying violation is a unique feature of the Lacey Act.<sup>45</sup> Further, “[t]he defendant need not be the one who violated the foreign law; the wildlife itself becomes ‘tainted’ even if someone else commits the foreign law violation.”<sup>46</sup> However, such prosecutions, or even the threat thereof, have apparently not been forthcoming.<sup>47</sup>

A potential difficulty with Lacey Act prosecutions based on foreign laws is proving the scope and purpose of the underlying environmental law that constitutes the violation.<sup>48</sup> In United States v. Molt, 599 F.2d 1217, 1218-19 (3d Cir. 1979), the court found U.S. reptile dealer Hank Molt could not be prosecuted under the Lacey Act for conspiring to smuggle reptiles out of Fiji based upon regulations that “‘prohibited exports’ of ‘certain goods,’” because the foreign law

underlying the prosecution was “plainly merely a revenue law,” not one designed to protect wildlife from harvest and export, though that was its practical effect.

A Lacey Act prosecution for trade in wild-collected *kaiseri* based on a violation of underlying Iranian Department of the Environment law might similarly run into substantive difficulties. First and foremost, the actual metes and bounds of the Iranian law that is claimed to protect *kaiseri* are apparently little known, as all sources merely refer generally to an esoteric “protection under Iranian law”<sup>49</sup> or similar phrase, and the Iranians themselves characterize it vaguely as an un/under-enforced general species protection.<sup>50</sup> This seems to present similar characterization of the law difficulties as those the Molt court found crucial to the failed prosecution based on a violation of Fijian law; not to mention the practical difficulties of securing the multinational co-operation required by such a prosecution,<sup>51</sup> considering the socio-political tensions extant amongst the United States and Iran at present that have already led the United States to tread warily on the subject of international legislation concerning *kaiseri*.<sup>52</sup> Without a clear interpretation of the underlying Iranian law, and its purpose, a successful Lacey Act prosecution appears unlikely.

Another frequently used basis for the prosecution of importation of allegedly illegal animals is the smuggling statute,<sup>53</sup> under which a “felony . . . is a charging option whenever wildlife is illegally imported into the country.”<sup>54</sup> Violations of the statute include making false statements about the nature of the goods being imported,<sup>55</sup> which may be implicated here if customs documents on the imported *kaiseri* shipments falsely described the animals as being captive bred in Europe,<sup>56</sup> when in fact they were wild-collected.<sup>57</sup> Though it seems, practically speaking, that it would typically be very difficult to disprove claimed origins (wild-collected versus captive bred) in situations like this where the alleged captive reproduction occurred ex-

situ in a Southern nation, the Ukrainian dealer's self-incriminating statements<sup>58</sup> apparently make that significantly less burdensome here. In light of the aforementioned statements, the absence of prosecutions under the smuggling statute,<sup>59</sup> the Lacey Act equivalent of this false labeling violation,<sup>60</sup> or the practical equivalent felony 'false statement' offense,<sup>61</sup> suggests that either the importation documentation labeled the specimens as wild-collected and they were nevertheless cleared by United States Fish and Wildlife Service, that proof as to the origin of the imported stock is less clear than some<sup>62</sup> suggest, or that for some unknown reason the U.S. government is just not interested in prosecuting violations for this species.<sup>63</sup>

### **Recommendations for Change Going Forward**

Absent prosecutions in the U.S. for Lacey Act violations based upon Iranian Department of the Environment law, there is apparently no incentive for collectors to stop harvesting wild *kaiseri*, and certainly no incentive for buyers to stop purchasing them beyond a personal sense of intrinsic value of biodiversity in the wild.<sup>64</sup> One step can effectively address this enforceability issue,<sup>65</sup> listing under the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], in Appendix I, the most restrictive listing, would make unlicensed and unregulated trade amongst nations for primarily commercial purposes illegal,<sup>66</sup> providing an unambiguous and oft-applied<sup>67</sup> underlying environmental protection basis for Lacey Act prosecutions.

CITES Appendix I listing is appropriate for "all species threatened with extinction which are or may be affected by trade."<sup>68</sup> *Neurergus kaiseri* is a species in "critical decline,"<sup>69</sup> with discontinuous populations over a very small endemic range.<sup>70</sup> An inhabitant of marginal conditions, it is likely to face increasing stresses with increased temperatures and desertification associated with global warming.<sup>71</sup> The current mature adult wild population is estimated to range

from 200<sup>72</sup> to fewer than 1,000 individuals.<sup>73</sup> Extremely large numbers of wild-collected mature adults have been traded throughout Northern nation pet trade markets since 2005.<sup>74</sup>

Another legislative action the U.S. government could take to restrict trade in wild-collected *kaiseri* is listing the species under the US Endangered Species Act,<sup>75</sup> which would effectively eliminate interstate trade in the species in the U.S. (such an imposition would require permits for both buyers and sellers to keep and trade the species,<sup>76</sup> whether the animals are wild caught or captive bred,<sup>77</sup> creating a marketing disincentive for pet trade in the species, even if permits were granted).<sup>78</sup> Such an action is probably unnecessary, potentially expensive, and of little practical effect.

This action would probably be unnecessary because the addition of the species to CITES Appendix I, combined with the rapid decline in price<sup>79</sup> and possible market saturation,<sup>80</sup> would make smuggling wild collected animals economically inefficient relative to the risk of prosecution.

Potential expense would arise with such a listing as well. If the *kaiseri* were honestly represented on the import paperwork, and were approved for import by the United States Fish and Wildlife Department despite the Iranian law, it creates a strong case for detrimental reliance sufficient to defeat the requisite criminal intent of the anti-smuggling statutes<sup>81</sup> in most purchasers; these animals were honestly represented, and were approved as such by the Federal government. To require a greater diligence on the part of typical consumers than reliance upon the acts of federal officials charged with knowing the legal status of honestly represented animals<sup>82</sup> is unreasonable, particularly when the underlying law is foreign, ambiguously referred to, even by the relevant sovereign's representatives,<sup>83</sup> and is apparently not readily accessible.<sup>84</sup>

Taking this consumer argument of justified good faith reliance further, confiscation or forfeitures undertaken by the U.S. government in such circumstances arguably constitutes a property taking requiring compensation. Presumably, based on the numbers imported and the current market value of the species, this compensation value would be affordable for the government, but arguably unjustifiable.

Finally, there is precedent for CITES Appendix I species not being dual-listed under the Endangered Species Act; four of nine Appendix I-listed amphibians globally are not protected by the Endangered Species Act.<sup>85</sup>

### **Creation of a Gray Market**

The imposition of a new regulatory scheme concerning animals for which there are already private pet trade holdings has the potential to create a “gray market,” if all prior holdings are not taken by the state; some animals which predate the legal change that were legally imported with appropriate paper work will be indistinguishable from newly smuggled wild-collected animals brought into the country in contravention of environmental laws.<sup>86</sup> Countries typically either deal with this issue by attempting to distinguish animals legally held,<sup>87</sup> or at least legally acquired after being allowed into the country knowingly with accurate paperwork, or by adopting the position that public policy demands forfeiture,<sup>88</sup> the elimination of the species from the legal market, with compensation to the legal holders.

There are physical characteristics of *Neurergus kaiseri*, that when observed in commercial context tend to make wild-collected specimens distinguishable from captive-bred offspring when they otherwise would appear indistinguishable.<sup>89</sup> *Kaiseri* takes two to three years to reach maturity and adult size;<sup>90</sup> the sale of adult specimens without an increased price to compensate for literally additional years of labor and overhead to reach that stage would be a

sign that the pet trade vendor had not indeed made that investment, unless the market for the species in the U.S. became so oversaturated as to force breeders to “cut their losses” and get what they could for their genuine stocks in the current market,<sup>91</sup> which would actually represent a significant development towards practical cessation of illicit trade in newly wild-collected specimens.

### **Conclusion**

The U.S. government failed to initiate the species-listing procedure for *kaiseri* for the forthcoming CITES meeting based on a finding of insufficient available scientific information absent Iranian intent to pursue the listing,<sup>92</sup> despite public pressure within the U.S..<sup>93</sup> It is unclear why the U.S. refused to propose the species.<sup>94</sup> The notion that more scientific evidence is necessary to justify Appendix I listing<sup>95</sup> is believed to be pretext for a political decision.<sup>96</sup> Voice mail messages left by the author seeking comment from the relevant agencies in the U.S. decision making process<sup>97</sup> were unreturned.

Generally for similarly situated species in which trade has already extensively occurred, captive breeding in the U.S., and an accompanying reduction in price as the species becomes more available (and less rare/ prestigious to collectors), are the best means of reducing demand for wild-collected animals. This is particularly the case when captive bred specimens, which are typically hardier and less parasitized,<sup>98</sup> become available for the same, or essentially the same, price as wild-collected ones. When the economic advantage to traders in wild-collected specimens is removed, and they are faced with significant potential liability under an easy to apply law, such as an underlying CITES violation prosecuted under the Lacey Act,<sup>99</sup> illicit trade will become so economically inefficient that it stops the practice.<sup>100</sup> More protective measures, such as inclusion on the Endangered Species list, may be appropriate for species that have not



been traded in significant enough numbers to establish a founder population that can eventually economically out-compete the wild-collected trade, but that is not the case with *kaiseri*.

### **Addendum**

On November 13, 2009, subsequent to the composition of much of this paper, Iran submitted the proposal to make *Neurergus kaiseri* a CITES Appendix I species in March at the fifteenth conference of the parties at Doha, Qatar.<sup>101</sup> Unfortunately, or perhaps tellingly, the proposal still does little to clarify the metes and bounds of Iranian law in a manner that would be enforceable as a Lacey Act prosecution.<sup>102</sup>

It is unclear whether Iran's actions in proposing the species for listing will incentivize the United States to put the species on the United States Endangered Species list; no mention is made of efforts to regulate trade beyond non-permitted trans-boundary movement.<sup>103</sup> If the U.S. government pursued such a listing, it would end legal interstate transactions of the species, both wild-caught and captive bred, without both buyers and sellers being licensed to keep the species by the United States Fish and Wildlife Service.<sup>104</sup>

A property taking with compensation to remove the species from private hands is feasible, and would effectively eliminate any potential for a gray market in the species. However, it seems an unnecessary expense when economic efficiency, combined with the disincentive to illegal international trade of CITES Appendix I listing, suggest that the market for wild-collected *kaiseri*, at least in the U.S., has virtually disappeared; captive breeding and the law make smuggling not cost-effective.<sup>105</sup> In fact, such an act may serve merely to drive trade in the species "underground," actually incentivizing smuggling as conscientious captive breeders move away from producing the species, and demand once again exceeds supply.

The most efficient means of stopping the illicit trade in wild *kaiseri* appears to be “going after” the Ukrainian supplier; if their access to the wild newts is cut off, there is no evidence international trade in newly wild-collected *kaiseri* would continue.<sup>106</sup> The commercialization of the species seems to have been solely due to their connections and ability to access the wild-collected animals; the species was unavailable in the U.S. private trade before 2005,<sup>107</sup> and apparently all of the imports have come through them.<sup>108</sup> At this point, it is unclear whether the Ukrainian dealer plans to continue to offer the species. They have removed any mention of the species from their website,<sup>109</sup> where it was previously featured prominently, and have not returned an email inquiring about spring 2010 availability.<sup>110</sup> However, the Iranians are reporting the Ukrainian dealer plans to offer the species in spring 2010.<sup>111</sup> Whether the Ukrainians have already been forced to stop trading in wild-collected specimens due to economic inefficiencies of competing with private trade captive breeding successes, their connection has dried up, or they are ceasing in response to the scrutiny they have faced is unknown;<sup>112</sup> but practically speaks to lessen the apparent need to regulate commerce in the species within the United States in attempt to extinguish a gray market. CITES Appendix I protection is likely enough.

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<sup>1</sup> James M. Green, *Detailed Discussion of the International Trade in Wild-Caught Reptiles*, ANIMAL LEGAL & HISTORICAL CENTER AT MICHIGAN STATE UNIVERSITY COLLEGE OF LAW, 2005, <http://www.animallaw.info/articles/ddusitwr.htm>; Telephone Interview with Nate Nelson, Curator of Herpetology, Sedgwick County Zoo (Oct. 28, 2009).

<sup>2</sup> AmphibiaWeb, *Neurergus kaiseri*, [http://amphibiaweb.org/cgi/amphib\\_query?where-genus=Neurergus&where-species=kaiseri](http://amphibiaweb.org/cgi/amphib_query?where-genus=Neurergus&where-species=kaiseri) (last visited Nov. 28, 2009).

<sup>3</sup> The International Union for Conservation of Nature and Natural Resources Red List of Threatened Species, *Neurergus kaiseri*, <http://www.iucnredlist.org/details/59450/0> (last visited Nov. 28, 2009).

<sup>4</sup> Nelson, *supra* note 1.

<sup>5</sup> TRAFFIC North America, *The Kaiser's Spotted Newt – Traded to the Brink of Extinction*, 5 Traffic Rpt. 6 (May, 2006), available at: [http://www.traffic.org/regional-newsletters/traffic\\_report\\_5\\_1.pdf](http://www.traffic.org/regional-newsletters/traffic_report_5_1.pdf); Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], *Considerations for Proposals of Amendment of Appendices I and II*, CoP15 Prop.14, Doha, Qatar (2010), available at: <http://www.cites.org/eng/cop/15/prop/E-15%20Prop-14.pdf>.

<sup>6</sup> Nelson, *supra* note 1.

<sup>7</sup> Email from Alexandra Antonyuk, General Manager, Bion Terrarium Center (Ukr.) to Author (Mar. 14, 2007, 06:09:00 EST) (on file with author); Email from Natalie Kraschenko, Export Manager, Bion Terrarium Center (Ukr.) to Kamuran Tepedelen, Owner, Bushmaster Reptiles, Inc. (February 25, 2009, 11:22:49 EST) (on file with author); Prop. 14, *supra* note 5, at 6-7.

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- <sup>8</sup> Nelson, *supra* note 1.
- <sup>9</sup> Id.
- <sup>10</sup> Mozafar Sharifi, Nasrullah Rastegar-Pouyani, Vahid Akmalı & Somayeh Assadian Narengi, *On Distribution and Conservation Status of Neurergus kaiseri (CAUDATA: SALAMANDRIDAE)*, 15 RUSS. J. HERPETOLOGY 169, 172 (2008).
- <sup>11</sup> Nelson, *supra* note 1.
- <sup>12</sup> Green, *supra* note 1.
- <sup>13</sup> *Supra* note 2.
- <sup>14</sup> Id.
- <sup>15</sup> Nelson, *supra* note 1.
- <sup>16</sup> *Supra* note 2.
- <sup>17</sup> *Supra* note 10, at 171.
- <sup>18</sup> Nelson, *supra* note 1.
- <sup>19</sup> *Supra* note 3.
- <sup>20</sup> Id.
- <sup>21</sup> Compare Nasrullah Rastegar-Pouyani, *Ecology and Conservation of the Genus Neurergus in the Zagros Mountains, Western Iran*, 56 FROGLOG [Newsletter of the Declining Amphibian Populations Task Force of the World Conservation Union's Species Survival Commission], Apr. 2003, <http://www.open.ac.uk/daptf/froglog/FROGLOG-56-2.html>, and Prop. 14, *supra* note 5, at 4.
- <sup>22</sup> Prop. 14, *supra* note 5, at 4-5.
- <sup>23</sup> *Supra* note 2.
- <sup>24</sup> FROGLOG, *supra* note 21.
- <sup>25</sup> Prop. 14, *supra* note 5, at 5.
- <sup>26</sup> Id.
- <sup>27</sup> Nelson, *supra* note 1.
- <sup>28</sup> *Supra* note 2; Nelson, *supra* note 1.
- <sup>29</sup> *Supra* note 2.
- <sup>30</sup> Nelson, *supra* note 1.
- <sup>31</sup> Caudata Culture, *Neurergus kaiseri*, [http://www.caudata.org/cc/species/Neurergus/N\\_kaiseri.shtml](http://www.caudata.org/cc/species/Neurergus/N_kaiseri.shtml) (last visited Nov. 28, 2009).
- <sup>32</sup> Nelson, *supra* note 1.
- <sup>33</sup> Posting of *Neurergus kaiseri* For Sale to <http://www.caudata.org/forum/211976-post1.html> (Nov. 8, 2009, 00:00:00 EST).
- <sup>34</sup> Traffic, *supra* note 5; XE Currency Converter, <http://www.xe.com/> (last visited on Nov. 28, 2009).
- <sup>35</sup> For Sale, *supra* note 33.
- <sup>36</sup> Id.
- <sup>37</sup> Prop. 14, *supra* note 5.
- <sup>38</sup> Kraschenko, *supra* note 7.
- <sup>39</sup> Traffic, *supra* note 5.
- <sup>40</sup> Nelson, *supra* note 1.
- <sup>41</sup> 16 U.S.C. § 3374.
- <sup>42</sup> Id. at § 3373(a).
- <sup>43</sup> Id. at § 3373(d).
- <sup>44</sup> Id. at § 3372(a)(1).
- <sup>45</sup> Green, *supra* note 1.
- <sup>46</sup> Id.
- <sup>47</sup> Nelson, *supra* note 1.
- <sup>48</sup> Green, *supra* note 1.
- <sup>49</sup> Zoological Society of London, *Evolutionarily Distinct & Globally Endangered - Luristan Newt (Neurergus kaiseri)*, [http://www.edgeofexistence.org/amphibians/species\\_info.php?id=625](http://www.edgeofexistence.org/amphibians/species_info.php?id=625) (last visited Nov. 28, 2009); IUCN, *supra* note 3; AmphibiaWeb, *supra* note 2; Traffic, *supra* note 5.
- <sup>50</sup> Prop. 14, *supra* note 5, at 8.
- <sup>51</sup> Green, *supra* note 1.
- <sup>52</sup> *Supra* note 2.
- <sup>53</sup> Green, *supra* note 1.

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<sup>54</sup> Id.

<sup>55</sup> 18 U.S.C. § 545.

<sup>56</sup> Nelson, *supra* note 1.

<sup>57</sup> Traffic, *supra* note 5.

<sup>58</sup> Id. at 6.

<sup>59</sup> 18 U.S.C. § 545.

<sup>60</sup> 16 U.S.C. § 3372(d).

<sup>61</sup> 18 U.S.C. § 1001.

<sup>62</sup> Prop. 14, *supra* note 5, at 6-7; Traffic, *supra* note 5.

<sup>63</sup> Nelson, *supra* note 1.

<sup>64</sup> Id.

<sup>65</sup> Letter from Alejandra Goyenechea [International Counsel] & Peter T. Jenkins [Director of International Conservation], Defenders of Wildlife, to Dr. Rosemarie Gnam, Chief, Division of Scientific Authority, U.S. Fish & Wildlife Service 1-2 (Nov. 26, 2008), available at: [http://www.defenders.org/resources/publications/programs\\_and\\_policy/international\\_conservation/amphibian\\_cites\\_listing\\_proposal\\_to\\_usfws.pdf](http://www.defenders.org/resources/publications/programs_and_policy/international_conservation/amphibian_cites_listing_proposal_to_usfws.pdf).

<sup>66</sup> Green, *supra* note 1.

<sup>67</sup> Id.

<sup>68</sup> DAVID HUNTER, JAMES SALZMAN & DURWOOD SAELEKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1099 (3d ed. 2007).

<sup>69</sup> *Supra* note 65, at 26.

<sup>70</sup> Id.

<sup>71</sup> Id.

<sup>72</sup> Nelson, *supra* note 1.

<sup>73</sup> *Supra* note 3.

<sup>74</sup> See Traffic, *supra* note 5; Prop. 14, *supra* note 5, at 6-7.

<sup>75</sup> 16 USC §§ 1531-44.

<sup>76</sup> Green, *supra* note 1.

<sup>77</sup> Id.

<sup>78</sup> Nelson, *supra* note 1.

<sup>79</sup> See FN 34.

<sup>80</sup> *Supra* note 33.

<sup>81</sup> Green, *supra* note 1.

<sup>82</sup> Nelson, *supra* note 1.

<sup>83</sup> Prop. 14, *supra* note 5.

<sup>84</sup> Nelson, *supra* note 1.

<sup>85</sup> Compare CITES, Appendices I, II, and III, <http://www.cites.org/eng/app/appendices.shtml> (last visited Nov. 28, 2009), and U.S. Fish & Wildlife Service, Endangered Species Program, <http://www.cites.org/eng/app/appendices.shtml> (last visited Nov. 28, 2009).

<sup>86</sup> Nelson, *supra* note 1.

<sup>87</sup> *Supra* note 68.

<sup>88</sup> Nelson, *supra* note 1.

<sup>89</sup> Id.

<sup>90</sup> Id.

<sup>91</sup> Telephone Interview with Tom Weaver, Conservation Biologist, Denver Zoo (Oct. 29, 2009).

<sup>92</sup> *Supra* note 2.

<sup>93</sup> See generally *Supra* note 65, at 26.

<sup>94</sup> Nelson, *supra* note 1.

<sup>95</sup> *Supra* note 2.

<sup>96</sup> Nelson, *supra* note 1.

<sup>97</sup> *Supra* note 2.

<sup>98</sup> Green, *supra* note 1.

<sup>99</sup> Id.

<sup>100</sup> Nelson, *supra* note 1.

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- <sup>101</sup> CITES, *Notification to the Parties – Proposals to amend Appendices I and II at the 15<sup>th</sup> meeting of the Conference of the Parties*, at 1, 7, No. 2009/047 (Nov. 13, 2009), available at: <http://www.cites.org/eng/notif/2009/E047.pdf>; Prop. 14, *supra* note 5.
- <sup>102</sup> Prop. 14, *supra* note 5, at 7.
- <sup>103</sup> Prop. 14, *supra* note 5.
- <sup>104</sup> Nelson, *supra* note 1.
- <sup>105</sup> *Supra* note 91.
- <sup>106</sup> Nelson, *supra* note 1.
- <sup>107</sup> Traffic, *supra* note 5; Nelson, *supra* note 1.
- <sup>108</sup> Nelson, *supra* note 1.
- <sup>109</sup> Bion Terrarium Center, Stock List, <http://www.bion.com.ua/stocklist/> (last visited Nov. 28, 2009); Bion Terrarium Center, Photo Gallery, <http://www.bion.com.ua/photogallery/> (last visited Nov. 28, 2009).
- <sup>110</sup> Email from Author to Alexandra Antonyuk, General Manager, Bion Terrarium Center (Ukr.) (Oct. 2, 2009, 12:34:00 EST) (on file with author).
- <sup>111</sup> Prop. 14, *supra* note 5, at 7.
- <sup>112</sup> Nelson, *supra* note 1.