

PERSPECTIVE

Submitted to: *People and Nature*

No, ecosystems do not have intrinsic value! A response to the Conguillío Statement

Jonathan A. Newman^{1,2}

¹  0000-0003-3155-4084

² Wilfrid Laurier University, Waterloo, Ontario, Canada

Correspondence

Department of Biology, Wilfrid Laurier University, 75 University Ave. West, Waterloo, Ontario, Canada, N2L 3C5
Email: jonathannewman@wlu.ca

Funding information

Natural Science and Engineering Research Council, Canada

1. The Conguillío Statement on the alleged values and responsibilities of ecologists claims that *ecosystems are intrinsically valuable*. This is a common claim by ecologists and the authors of the Conguillío Statement probably view it as uncontroversial.
2. Ecologists want to invoke the concept of intrinsic value because it seems to cover more of nature than instrumental value. However, ecologists often use the term without recognizing that it can have significantly different meanings. In particular ecologists often invoke the conception of *objective intrinsic value* because it has more moral force than other conceptions.
3. The quintessential entities thought to have intrinsic value are individual human beings. There are two approaches to showing that ecosystems *also* have intrinsic value: monism and pluralism. Monism attempts to show that we can come to recognize the objective intrinsic value in ecosystems by showing that they have this value for reasons similar to those thought to engender it in individual humans. This position does not seem plausible. Pluralism attempts to account for the supposed intrinsic value of ecosystems for some other reason, and this account exists independently of our traditional human-centric ethics. The problem with the pluralist approach is that there is no principled way to reconcile the inevitable conflicts that will arise between human interests and the claimed intrinsic value of ecosystems. It seems that unless we are prepared to throw out our human ethics, pluralism will not work.
4. While there are active philosophical research programs aimed at resolving these conflicts, ecologists should probably treat the Conguillío Statement's claim of intrinsic value for ecosystems as an *essentially contested concept*—one that is inherently debatable, and for which there is no single agreed-upon understanding or interpretation.

KEYWORDS

intrinsic value, The Conguillío Statement, essentially contested concepts

1 | INTRODUCTION

Recently, a group of 33 ecologists published the *Conguillio Statement* detailing the alleged values and responsibilities of ecologists (Arnillas et al., 2024). The statement was introduced to ecologists at a workshop held during the 2024 annual meeting of the British Ecological Society, run by Hazel Norman from the society and Marc Cadotte from the University of Toronto—both among the coauthors of the statement. As part of the statement, the authors claim that it is our (ecologists') general responsibility to:

*"Consider the **intrinsic value** of natural ecosystems, acknowledging that these ecosystems and all living organisms require space and resources to thrive."* (Arnillas et al., 2024, p. 5; emphasis added)

This is another example of ecologists making such a claim without evidence or argument. Ecologists would do well to remember Hitchens' Razor (Wikipedia contributors, 2024): "*What can be asserted without evidence can be dismissed without evidence.*" For the claim to have any force or meaning, indeed for it to be taken seriously at all, it requires a defense.

I think that the authors of the Conguillio Statement do not understand what they are claiming, do not need this claim to support the rest of the statement, and the claim itself conflicts other parts of the statement. In this paper, I will examine why ecologists wish to make this claim, explain what intrinsic value is, and provide an argument for why ecosystems are not the kinds of thing that are likely to have intrinsic value. I have no doubt that readers of this journal will not like this argument, but if we are going to make progress, we have to give up arguments that don't work or we will never convince anyone that we should conserve nature who isn't already convinced.

2 | INSTRUMENTAL VERSUS INTRINSIC VALUE

There are two fundamental types of arguments for why we ought to conserve ecosystems, those that turn on their *instrumental value* and those that turn on their supposed *intrinsic value*.

Instrumental value arguments are based on the usefulness of ecosystems for the well-being of humans (for examples, see Chapter 2 of the Millennium Ecosystem Assessment report [2003]). While it's true that some ecosystems are beneficial to us and warrant conservation, relying solely on instrumental value will not secure all the conservation ecologists seek. There will always be ecosystems that may not be useful to us or are not *more useful* than the activities that could harm the ecosystem.¹ Furthermore, using instrumental value arguments leads to some uncomfortable implications. For example, if one type of ecosystem provides more benefits than another, should we replace it? This is not an action that most ecologists would endorse (see Newman et al., 2017, Chapter 6 for further discussion). In fact, many ecologists believe that this type of thinking has contributed to the environmental harm we are trying to prevent. So, what alternatives do we have? This is where the concept of intrinsic value comes in.

Intrinsic value is different from instrumental value in that it is based on factors other than the usefulness of an ecosystem. The strength of an instrumental value argument relies on *empirical evidence* showing that an ecosystem is not only useful but more useful than its alternatives. In contrast, the strength of intrinsic value arguments depends on the *philosophical reasoning* supporting the claim. Since intrinsic value arguments do not consider an ecosystem's usefulness, they serve as strong justifications for conservation, provided they are correct. This is because they encompass

¹Damming a river for hydroelectric generation or flood control might be an example. It's not inconceivable that humans might find more utility in these uses than they did in the pre-dam river ecosystem.

all types of ecosystems, including those that may not have any apparent usefulness to us.

3 | INTRINSIC VALUE IMPLIES MORAL SIGNIFICANCE

Saying that an ecosystem has intrinsic value is a claim that it is an object of our moral concern. In which case, when we make decisions about the ecosystem, we are making moral judgments. Moral judgments differ from other types of judgment in that they are subject to specific logical requirements, which other judgments are not. There are three key logical requirements that define moral judgments.

Overridingness refers to the idea that when making a moral judgment, one asserts that this judgment should *override* considerations of prudence, law, etiquette, and other norms. By overriding other considerations, a moral judgment has the power to compel correct behavior by moral agents.

Universalizability means that one should judge similar cases in a similar manner. For example, if I believe that fur farming is wrong because it disrespects the interests of sentient animals, universalizability dictates that using the same reasoning, I should also consider it wrong to farm chickens. If I refuse to apply my judgment universally, I am effectively denying that it is a moral judgment, making it little more than a personal opinion.

Consistency or Coherence is the requirement that my moral judgments make sense when taken together. While I cannot prove an ethical argument, it is reasonable to expect that—at a minimum—my ethical arguments are internally consistent with one another. This is called a *coherentist theory of epistemic justification*. For example, if I believe that fur farming is morally wrong, but consume factory-farmed chickens, I would appear to be incoherent in my ethical stance.

In contrast to moral judgments, judgments about prudence—those relating to what is best for oneself—are considered neither universalizable nor overriding. What might be best for me may not necessarily be best for you, and moral judgments override our personal interests. Some other types of judgments may be universalizable but not overriding. For example, in many cultures, there is an expectation of greeting someone warmly when you meet them. This etiquette norm is universalizable in the sense that people generally agree that it applies to everyone in normal circumstances. However, it is not overriding, as there could be situations where a moral concern overrides the expectation of a polite greeting. For instance, if someone is in immediate danger, rushing to help them would be more important than stopping to say hello. Aesthetic judgments are also seen as universalizable but not overriding.

The reader should take particular note of the utility in advancing our conservation goals if we can say that our moral judgments about ecosystems override our other interests (e.g., instrumental) in them.

4 | WHAT IS INTRINSIC VALUE?

Claiming that an entity possesses intrinsic value means that it has value inherently, independent of whether it meets the needs or wants of others. An entity can possess both intrinsic and instrumental value, but the reasons for each type of value are very different; possession of one does not imply possession of the other.

It is helpful to distinguish between the general *concept* of intrinsic value and its various specific *conceptions*. People may share the same basic concept of intrinsic value even if they have different conceptions of it. These conceptions are shown in Table 1. Ecologists often feel compelled to invoke the *objective conception*² of intrinsic value because it

²A famous thought experiment to test your conception is the so-called *last person standing* problem (Routley, 1973). It goes like this. Suppose that I am the last human being on Earth. And suppose, apropos of nothing, I decide to spend my remaining days eradicating the California redwood (*Sequoia sempervirens*). Is that morally wrong? If there are no people on Earth, do redwoods have any value? If you answer “yes,

Conceptions of Intrinsic Value	Definition	Moral Force
Subjective	Intrinsic value is projected by conscious valuers onto a world that lacks inherent value	Minimal, indirect consideration
Relational	Intrinsic value arises from the interaction between human psychology and specific features of the natural world	
<i>Idiosyncratic</i>	Intrinsic value arises from relationships that are unique to individuals	Minimal, indirect consideration
<i>Culturally shared norms and values</i>	Members of specific societies may identify different classes of entities as intrinsically valuable	Intermediate, direct consideration from those within the culture, indirect consideration from those outside
<i>Hard-wired</i>	Humans are hard-wired to make certain judgments about intrinsic value, leading to a convergence across different cultures regarding which natural entities they recognize as intrinsically valuable	High, direct consideration
Objective	Intrinsic value is a property of the external world that human valuers recognize; it is not assigned by human	Maximal, direct consideration

TABLE 1 Conceptions of intrinsic value and a rough assessment of their relative moral force. Moral force is the power to compel right actions by moral agents. *Direct consideration* requires that moral agents consider the ecosystem's morally relevant interests. *Indirect consideration* indicates that moral agents do not give direct moral consideration to the ecosystem but instead focus their consideration towards other humans who themselves give moral consideration to the ecosystem in question.

carries the most *moral force*. Moral force is the power to compel moral agents to make morally correct decisions.³ For instance, when arguing for the preservation of an ecosystem, one might assert that it holds historical significance for a particular culture. This can be framed as a claim of relational intrinsic value, based on shared norms and values (see Table 1). Take for example the redwood forests of northern California, an ecosystem which holds deep historical and cultural significance for several Indigenous peoples, including the Yurok, Tolowa Dee-ni', and others (US National Park Service, 2025). The ancient redwoods are often seen as sacred living beings. They figure into oral traditions, spiritual practices, and stories passed down through generations. While this perspective may resonate deeply with those familiar with Native American culture, it is culturally specific and may seem less morally compelling than claiming that

they still have value" then your moral intuition suggests an objectivist conception. Note that this thought experiment is often rephrased as the *last valuer standing* to recognize that humans might not be the only beings capable of valuing.

³Think about moral force this way: suppose I tell you that there will be seven hours of daylight today. Does that give you a moral reason to do anything? No, it doesn't. It's a fact without moral force. Now suppose I tell you that Grassy Narrows First Nation has been severely impacted by mercury contamination from a pulp and paper mill, leading to serious health issues. That fact would give you a moral reason to act. It would be a fact with moral force.

the ecosystem possesses objective intrinsic value—value that is not tied to its historical relationship with humans or any connection to humanity at all.

Ecologists often claim that ecological wholes, such as species and ecosystems, possess objective intrinsic value,⁴ largely due to the subjective elements present in all the other conceptions, which diminish their moral force. However, such claims come with specific argumentative challenges. A major concern stems from the traditional belief that the quintessential entities with objective intrinsic value are conscious human beings. Therefore, anyone advocating for the recognition of an ecosystem—or any unconventional candidate—as having objective intrinsic value must provide a clear rationale for this claim. They also need to explain why both humans *and* ecosystems share this value.

5 | WHY ECOSYSTEMS DON'T HAVE INTRINSIC VALUE

What kind of argument can be made to support the claim that ecosystems have intrinsic value? To begin, it is important to identify certain 'non-starters' in such arguments. These claims are outlined in Table 2. While space does not allow for an in-depth exploration of these arguments, they can be easily refuted and should not be relied upon (see Newman et al., 2017, Chapter 9 for a thorough treatment).

Claim	Why it's a non-starter
Ecosystems are intrinsically valuable because they are <i>natural</i>	Commits the <i>naturalistic fallacy</i>
Ecosystems are intrinsically valuable because they are <i>made up</i> of individual plants and animals which are intrinsically valuable	Commits the <i>fallacy of composition</i>
Ecosystems are intrinsically valuable because they <i>give rise</i> to individual plants and animals which are intrinsically valuable	Commits the <i>origin fallacy</i>
Ecosystems are intrinsically valuable because they are <i>rare</i>	Rarity is not a property of an ecosystem, it refers to the abundance of certain <i>types</i> of ecosystems

TABLE 2 Some claims commonly made in arguments about the intrinsic value of ecological wholes like ecosystems. These moves are non-starters that are easily refuted and should not be relied upon (see Newman et al., 2017, Chapter 9 for details).

There are two primary approaches ecologists might adopt to defend the claim that ecosystems have intrinsic value. The first is a *monist* approach, which argues that the intrinsic value of both humans and ecosystems can be understood through a single ethical framework. The second is a *pluralist* approach that supports one moral framework for humans (and possibly sentient animals) and a different moral framework for ecosystems. I will discuss these in order. I think the monist approach is generally easier for ecologists to comprehend and attempt to defend. Conversely, the pluralist approach encounters numerous challenges and may be best left to academic philosophers for now.

⁴For example, Soulé's well-known characterization of conservation biology seems to refer to objective intrinsic value. His assertion that "species have value in themselves, a value neither conferred nor revocable" (1985, p. 731) suggests that this value exists in nature independently of human perception.

5.1 | Monism

Monism adopts an *extensionist approach* to understanding the value of non-human nature. This perspective emphasizes expanding our familiar ethical considerations, typically reserved for human relationships, to encompass a wider range of living beings and ecological systems. The core idea of extensionist ethics is that certain widely accepted moral beliefs require us, based on the principle of universalizability, to extend moral consideration to various non-human entities. In other words, we show how those considerations that make us think that individual humans have intrinsic value also apply to ecosystems. Some examples of why humans are thought to possess intrinsic value are given in Table 3.

Philosophical Perspective	Reason for Intrinsic Value
Kantian Ethics	Human beings have intrinsic value due to their capacity for rational autonomy and moral agency. They are ends in themselves, not merely means to an end.
Humanism	Human beings possess intrinsic value because of their capacity for reason, creativity, and moral choice. Their ability to create meaning and contribute to society gives them inherent worth.
Utilitarianism	Humans have intrinsic value due to their capacity to experience pleasure and pain, which makes their well-being morally significant.
Existentialism	Individuals have intrinsic value because they possess the freedom to create their own meaning and define themselves in an indifferent universe.
Deontological Ethics	Any being with the capacity for beliefs, desires, memory, a sense of the future, and an individual welfare that can be harmed or benefited is inherently valuable and deserving of moral rights. Such beings are not mere resources but individuals who experience life from the inside, and thus warrant our moral respect.
Virtue Ethics	Humans have intrinsic value because they have the potential for cultivating virtue and achieving human flourishing, which is tied to their capacity for growth and self-realization.

TABLE 3 Philosophical perspectives on the intrinsic value of human beings.

Sparing the reader the details, it is relatively easy to extend the idea of intrinsic value to individual sentient animals, at least via the utilitarian (see e.g., Singer, 2022) or deontological ethical theories (see e.g., Regan, 1992). By their very definition, the other theories seem to pertain only to humans and would be difficult to extend to animals, let alone ecosystems. An example of a utilitarian's reasoning can be seen in the following quote from Peter Singer:

"The capacity for suffering and enjoyment is a prerequisite for having interests at all, a condition that must be satisfied before we can speak of interests in a meaningful way. It would be nonsense to say that it was not in the interests of a stone to be kicked along the road by a schoolboy. A stone does not have interests because it cannot suffer. Nothing that we can do to it could possibly make any difference to its welfare. The capacity for suffering and enjoyment is, however, not only necessary, but also sufficient for us to say

115 that a being has interests—at an absolute minimum, an interest in not suffering. A mouse, for example,
 does have an interest in not being kicked along the road, because it will suffer if it is.” (Singer, 1990, pp.
 7–8, emphasis in original)

Again, sparing the reader the details, it is very difficult to see how we could extend intrinsic value to ecosystems. Ecosystems don't have the capacity to consciously experience anything, and they don't have an individual welfare. To
 120 quote Gary Varner, in his paper *No Holism⁵ Without Pluralism*:

“If it is plausible to say that ecosystems (or biotic communities as such) are directly morally considerable—and that is a very big if—it must be for a very different reason than is usually given for saying that individual human beings are directly morally considerable.” (1991, p. 179; emphasis in the original)

Efforts to recognize the intrinsic value of ecosystems within monist ethical frameworks are unsuccessful because
 125 we cannot demonstrate that ecosystems possess interests that are morally relevant.⁷ It appears that extending familiar
 ethical theories will not lead us to see ecosystems as intrinsically valuable. So, what remains? In the following section,
 I will explore a pluralistic approach to justifying the intrinsic value of ecosystems.

5.2 | Pluralism

130 Pluralism, in this context, is the view that we can apply one ethical framework for making decisions about how to
 treat humans (or possibly all sentient organisms) and a different framework for making decisions about how to treat
 ecosystems, and these two frameworks need not be compatible.

To make this idea a little more concrete, consider the land ethic. Aldo Leopold's land ethic is well-known among
 ecologists and often serves as a starting point for pluralistic approaches. Leopold stated, “A thing is right when it tends
 to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” (Leopold,
 135 1949, pp. 224–225). While Leopold himself was not an *ecofascist*, some critics argue that his land ethic is a form
 of *ecofascism*. Leopold's emphasis on the primacy of the land community (soils, waters, plants, animals) subjugates
 individual human interests to the collective good of the ecosystem. This holistic perspective would justify sacrificing
 individual rights or freedoms if necessary to preserve ecological integrity (see e.g., Shrader-Frechette, 1996; Regan,
 1992; Aiken, 1984). However, defenders of Leopold point out that his intent was to *extend* moral concern beyond
 140 humans (see section 5.1).

Perhaps the most well-known philosopher defending the land ethic, J. Baird Callicott explicitly rejected pluralism. In a section titled *Moral Pluralism's Achilles Heel: The Hard Choice Between Contradictory Indications*, he stated:

“Wenz (1988, 313), pluralist convert though he may have become, clearly articulates one reason to beware
 its siren lure: ‘Without a single master principle in the background, what is to be done ...when one of the

⁵Holism is the position that ecological whole, like species and ecosystems, have intrinsic value.

⁶If an entity has objective intrinsic value, then it is *directly* morally considerable. Contrast this with *indirect* moral considerability. I possess a pocket knife that my father carried with him in Vietnam. This knife holds a relational, idiosyncratic intrinsic value for me. You, as a moral agent, have no direct duties toward the knife. *Ceteris paribus*, you do no moral wrong to the knife if you destroy it. However, you would harm me, to whom you do have direct duties. Thus, in a sense, you have indirect duties to the knife.

⁷Alert readers might note that I sidestepped entirely the difficult question of whether ecosystems are even real things found in nature, rather than useful fictions. If they are not real things—and this is a topic of genuine debate—then the whole question of intrinsic value seems moot (see e.g., Garcia and Newman, 2016; Newman, 2025)

145 *independent principles in the pluralistic theory requires a course of action different from and incompatible with the course of action required by one of the other independent principles...? In this kind of situation, the theory yields either no recommended course of action or contradictory recommendations.'*

150 *Consistency is not just a shrine before which philosophers worship. There is a reason for wanting consistency, ensured by organization around or derivation from a 'master principle,' among one's practical precepts. **Attempting to act upon inconsistent or mutually contradictory ethical principles results in frustration of action altogether or in actions that are either incoherent or mutually cancelling.*** (Callicott, 1999, pp. 153–154; emphasis added)

155 Instead, Callicott made a career attempting to fit the land ethic into a single monist ethical framework, which he called *communitarianism*. His defense of communitarianism is complicated and far beyond the scope of this essay. Callicott is a well respected philosopher, but he also has a lot of well respected critics, and among philosophers his theory remains contested (see Newman et al., 2017, Chapter 10 for a detailed analysis and critique of communitarianism). Others have tried alternative approaches, including most recently that by Roberta Millstein (2024).

Pluralism is implied in two consecutive declarations from the Conguillio Statement (Arnillas et al., 2024, p. 5) that we ecologists have responsibilities to:

- 160 1. "Ground our practice within the framework of social and environmental justice to support an equitable distribution of wealth, resources, opportunities, and access to a healthy environment for current and future generations."
2. "Consider the intrinsic value of natural ecosystems, acknowledging that these ecosystems and all living organisms require space and resources to thrive."

165 To try to explain this problem, consider an example.⁸ Suppose the Yanomami people (The Yanomami Foundation, 2024) in the northern Brazilian rain forest want to slash and burn an area of forest to plant crops. Doing so might be morally good in that it helps meet the needs of the Yanomami people. But doing so will also destroy (part of) a forest ecosystem. Is that a bad thing? It might be if the forest is more useful to the Yanomami people than the agroecosystem that replaces it. This is an instrumental value approach, which ecologists tend to shun. It might be an ethical decision when viewed from a monist framework because burning the forest will interfere with the lives of individual sentient animals. The presence of sentient animals does not automatically mean that converting the land is wrong, but using a monist approach we have an ethical framework for making the decision. If we take a utilitarian approach to ethical reasoning, then we try to identify which action—burn the forest or don't—maximizes the utilitarian's conception of happiness. From a deontological framework, we would work out which organisms have moral rights and what duties these rights demand of us. And so on. But from a pluralist perspective we are stuck. Utilitarianism might—for the sake of argument—say converting the land is the right thing to do, while the land ethic says it is not. From a framework of social and environmental justice, the Yanomami people are probably justified in using the land for this purpose. If the ecosystem has intrinsic value, the Yanomami people are probably not justified in using the land in this way. What do we do? We have no way to reconcile these two frameworks.

175 Academic philosophers continue to argue about moral pluralism in environmental ethics (e.g., Campos and Vaz, 2021; Vincent and Koessler, 2020; Stephens, 2021) but these are highly contested and difficult arguments that are beyond the training and abilities of most ecologists to evaluate. Hence a pluralism defense is probably best left to the philosophers for now. For those interested in learning more, Elinor Mason (2023) provides an up-to-date summary of value pluralism.

⁸The reader may be tempted to explain away the conflict I am mooted; that's the trouble when one uses real examples instead of hypotheticals. I urge the reader to take the example at face value to understand the point I am making about conflicting moral frameworks.

6 | CONCLUSIONS AND HUMBLE ADVICE

The Conguillío Statement (among others) claims that ecosystems have intrinsic value. I've outlined the challenges in defending this claim. From a monist perspective, it seems implausible that ecosystems have interests that must be respected. From a pluralist perspective, making decisions is impossible when conflicts inevitably arise. I am one person, one ecologist, and this is how I see the argument. Even if you do not agree with my views (views that are shared by many others) I suggest that ecologists regard the claim as an *essentially contested concept* (Gallie, 1955). Such concepts are inherently debatable, and there is no single, agreed-upon interpretation or understanding. Therefore, I suggest ecologists exercise caution when using this concept, acknowledging both the challenges of defending it and the widespread disagreement surrounding it.

I understand that ecologists want the claim to be true, as it aligns with our moral intuition. However, I suggest that we focus on justifications for conservation that ecologists are better prepared to defend. The Millennium Ecosystem Assessment (2003) is entirely focused on the linkages between ecosystem services (another way of saying instrumental value) and human well-being.⁹ We can make significant conservation progress without having to defend an essentially contested concept. In the specific case of the Conguillío Statement, it's unclear what function the intrinsic value claim serves or why it is needed. If that singular responsibility were removed, it would have no impact on the remainder of the statement. I suspect the same may be true when ecologists invoke the concept of intrinsic value in other discussions.

7 | ACKNOWLEDGEMENTS

I work on the shared traditional territory of the Neutral, Anishnaabe, and Haudenosaunee peoples. I recognize, honor, and respect these Nations as the traditional stewards, since time immemorial, of the lands and water on which Wilfrid Laurier University is now present. This acknowledgement represents my responsibility and commitment to learn about and confront colonial legacies and to earnestly engage in the unfinished work of reconciliation. This work was supported by a Discovery Grant awarded to me by the Canadian Natural Science and Engineering Research Council (NSERC). I thank Pedro Peres-Neto and Georgia Mason for comments on an earlier version of this paper.

8 | CONFLICT OF INTEREST

I have no conflicts of interest to declare.

REFERENCES

- Aiken, W. (1984) Ethical issues in agriculture. In *Earthbound: New Introductory Essays in Environmental Ethics* (ed. T. Regan), 247–288. New York: Random House.
- Arnillas, C. A., Stotz, G., Chinga Chamorro, J. B., Collinge, S., Chiuffo, M., Kariuki, R., Norman, H., Ortiz, A. M., Regan, H., Visakorpi, K., Devarajan, K., Klein, A.-M., Schnabel, F., Arponen, A., Cadotte, M., Cousens, R., Ehrlich, K., Grell-Brisk, M., Hughes, L., Kharouba, H., Martin, T., Morelli, T., Rumpff, L., Soares, B., Prado-Valladares, A. C., Williams, M., Winter, M., Yannelli, F., Beyene, M., Fernando, Y., Hart, T., Santaoja, M. and Santos Domínguez, N. (2024) The Conguillío Statement on the values and responsibilities of ecologists. *EcoEvoRxiv*. URL: <https://doi.org/10.32942/X2B90T>.

⁹Intrinsic value is only mentioned in the introduction, serving as an acknowledgement that there might be more to consider than ecosystem services.

- Callicott, J. B. (1999) *Beyond the Land Ethic*. SUNY series in Philosophy and Biology. Albany, NY: State University of New York Press.
- Campos, A. S. and Vaz, S. G. (2021) Justificatory moral pluralism: A novel form of environmental pragmatism. *Environmental Values*, **30**, 737–758.
- Gallie, W. B. (1955) Essentially contested concepts. *Proceedings of the Aristotelian Society*, **56**, 167–198.
- Garcia, R. K. and Newman, J. A. (2016) Is it possible to care for ecosystems? Policy paralysis and ecosystem management. *Ethics, Policy & Environment*, **19**, 170–182.
- Leopold, A. (1949) *A Sand County Almanac, and Sketches Here and There*. Oxford University Press.
- Mason, E. (2023) Value Pluralism. In *The Stanford Encyclopedia of Philosophy* (eds. E. N. Zalta and U. Nodelman). Metaphysics Research Lab, Stanford University, Summer 2023 edn.
- Millstein, R. L. (2024) *The Land Is Our Community: Aldo Leopold's Environmental Ethic for the New Millennium*. Chicago University Press.
- Newman, J. A. (2025) Communities and ecosystems. *EcoEvorvix*. URL: <https://doi.org/10.32942/X2BW5K>.
- Newman, J. A., Varner, G. and Linquist, S. (2017) *Defending Biodiversity: Environmental Science and Ethics*. Cambridge University Press.
- Regan, T. (1992) *Regan: Case for Animal Rights*. Berkeley, CA: University of California Press.
- Routley, R. (1973) Is there a need for a new, an environmental, ethic? In *Proceedings of the XVth World Congress of Philosophy, 1973*.
- Shrader-Frechette, K. (1996) Individualism, holism, and environmental ethics. *Ethics and the Environment*, 55–69.
- Singer, P. (1990) *Animal Liberation: A New Ethics for Our Treatment of Animals*. New revised edition. New York, NY: Avon Books.
- (2022) *Practical Ethics*. Cambridge University Press, 3rd edn.
- Soulé, M. E. (1985) What is conservation biology? *BioScience*, **35**, 727–734.
- Stephens, P. H. (2021) Pragmatism, pluralism, empiricism and relational values. *Environmental Values*, **30**, 661–668.
- The Millennium Ecosystem Assessment Program (2003) *Ecosystems and Human Well-being: A Framework For Assessment*. Washington, D.C., DC: Island Press.
- The Yanomami Foundation (2024) The Yanomami. URL: <https://www.yanomamifoundation.org/yanomami>. [Online; accessed 2024-12-27].
- US National Park Service (2025) Redwood Area History – Redwood National and State Parks. URL: <https://www.nps.gov/redw/learn/historyculture/area-history.htm>. [Online; accessed 2025-01-04].
- Varner, G. E. (1991) No holism without pluralism. *Environmental Ethics*, **13**, 175–179.
- Vincent, M. and Koessler, A.-K. (2020) Mapping moral pluralism in behavioural spillovers: A cross-disciplinary account of the multiple ways in which we engage in moral valuing. *Environmental Values*, **29**, 293–315.
- Wikipedia contributors (2024) Hitchens's razor – Wikipedia, the free encyclopedia. URL: https://en.wikipedia.org/w/index.php?title=Hitchens%27s_razor&oldid=1263050300. [Online; accessed 1-January-2025].