



Ecological religious education: new possibilities for educational practice

James Tomlinson¹

Published online: 15 October 2019
© Australian Catholic University 2019

Abstract

The crises evident in today's ecological context require the attention and action of Christian communities, including within the work of religious education. This essay describes a set of practices for religious education that integrate ecology as a constituent dimension of Christian formation and discipleship, organized around three key educational domains which holistically attend to students' heads, hearts and hands. Narratives derived from Christian traditions, as well as scientifically-based stories about the natural world, can serve as vehicles of religious and ecological knowledge that can also inform students' own lives and stories. Affectivity, or an embodied and "felt" type of knowing, is another important foundation for forming the whole person in relationship with nature. Finally, ethical education, with a particular focus on the virtues, links students' character development with their actions towards the natural world. Altogether, this paper argues that by incorporating practices from these three areas into religious education, teachers can have an important and effective role in promoting students' right relationships with the natural world.

Keywords Religious education · Ecology · Environmental education · Narrative · Affectivity · Virtue

1 Introduction

An appropriate way of beginning an exploration of the intersection of Christian religious education and ecology is with a brief survey of the ecological context in which the ministry of religious education is carried out today. Some notable characteristics include the perilous state of ecosystems around the planet, many of which are threatened by anthropogenic phenomena including climate change, pollution of waters and soils, and loss of precious biodiversity (World Wildlife Fund 2018). Human communities are suffering as well, especially communities of color or low socioeconomic status who are disproportionately affected by toxic pollution and other forms of environmental injustice (see Ammons and Roy 2015). Troubling consequences in human psychology and development are also being documented, including "nature deficit disorder" in children (Louv 2008, p. 36) and

✉ James Tomlinson
tomlinsj@bu.edu

¹ School of Theology, Boston University, 745 Commonwealth Avenue, Boston, MA 02215, USA

increasing psychic distress due to environmental change and degradation (Albrecht et al. 2007). Amidst these plights, religious leaders have made clear the moral and spiritual implications of humanity's disordered relationship with the natural world. As Pope Francis opened his recent encyclical *Laudato si'*:

The violence present in our hearts, wounded by sin, is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. This is why the earth herself, burdened and laid waste, is among the most abandoned and maltreated of our poor; she “groans in travail” (Rom 8:22). (2015, no. 2)

Looking at the contemporary ecological context in light of such religious and moral perspectives, and seeing too how environmental harm and injustice cut across so many different levels of human and planetary health, there can be little doubt that today's situation constitutes a crisis not just for religious faith but for the survival and future of life. To draw a bit further from the imagery of Romans as portrayed in *Laudato si'*, creation is indeed groaning—perhaps more loudly than ever before—as it waits for the children of God (cf. Rom 8:18–25) to bring reconciliation and renewal to the face of the earth. Today's ecological situation should bear strongly on the mission of religious education, creating a clear mandate for educating and empowering Christian communities to heal the human relationship with the natural world. In this paper I intend on exploring how religious educators can play a particularly important role in this healing process through such works as teaching about the connections between faith and ecology, fostering students' love for creation, and imparting moral wisdom to live in ways that promote the flourishing of all life.

A growing body of literature now exists around the integration of ecological concerns into Christian religious education, which reveals a significant uptick of activity in this area compared to the dearth of examples reported by Chamberlain (2000) nearly 20 years ago. Surveying these works reveals a diversity of focal areas, including critical dialogue between theology, science and religious education methods (Dalton 1990; Chamberlain 2000; Thurmond 2013; Martin 2010, 2015; Hoven 2015; Ayres 2017), the integration of ecology into theological education and ministerial formation (Price 2008; Ayres 2014; O'Brien 2014), and ethical dimensions of ecological religious education (Bratton 1990; McGrady and Regan 2008; Bouma-Prediger 2016). Diverse practical resources are also being developed for application in a variety of educational settings, including through the work of interfaith environmental organizations like Creation Justice Ministries and GreenFaith that are engaged in environmental advocacy and educational initiatives with churches, religious schools, and other faith-based organizations.¹ In addition, significant efforts are also underway in seminaries and schools of theology to integrate ecological concerns into curricula, including the offering of courses on the intersections of ecology, theology, and pastoral ministries including religious education.²

In this paper, while I actively dialogue with a number of these theoretical and practical projects, I also attempt to provide some novel contributions to the field of ecological religious education especially in the form of new possibilities for practices that integrate

¹ Web links for these organizations are creationjustice.org, and greenfaith.org.

² Major recent projects involving seminaries and graduate schools of theology include The Green Seminary Initiative (<https://www.greenseminaries.org>) and The Interfaith Center for Sustainable Development (<https://www.interfaithsustain.com>). For an in-depth report on schools' efforts in this area, see the Interfaith Center for Sustainable Development's 2017 document, “Report on Ecologically Informed Theological Education,” available on their organization's website.

ecology as a constituent dimension of Christian education. To provide something of a holistic framework for organizing and relating these practices, in the following sections I attend to the three educational areas of narrative, affectivity, and virtue ethics. These domains I take to correspond to the emphases on “head, heart, and hands” that Thomas Groome (2011, p. 14) calls essential for a holistic approach to religious education. Holistic approaches to ecological religious education, which have also been argued for recently by Ayres (2014), seek to form the whole person by tending to the multiple dimensions and ways in which humans relate with the natural world, a move that certainly seems essential for causing deep and lasting change in the lives of students. To augment methods and theories of religious education discussed below, I also bring in resources from other disciplines including psychology, the ecological sciences, Christian spirituality and environmental education, the latter being a rich field of research and practice that is largely untapped in religious education research. Given the range of considerations inherent in the effort to bridge religious education and ecology, an open and flexible interdisciplinary approach seems essential to support this work.

Regarding a few other preliminary matters, it should be noted that the practices outlined below are not designed for any one particular type of educational setting, but rather are intended to potentially inform educational practice in a variety of settings such as youth and young adult programs, adult faith formation classes or lectures, or retreats or other kinds of special programming in higher education contexts. Some adaptations will of course be necessary for applying the practices in order to suit the differing developmental, cultural, and other characteristics that define particular educational environments. It should also be mentioned that although this paper draws broadly from ecology and environmental education, it is not presumed that religious educators will have much preexisting knowledge or experience in these subjects. While crossing into new areas of teaching and learning can admittedly be complex and demanding in several respects, I would also add that especially with access to practical resources on these subjects (including those referred to in this paper), religious educators can realistically expect to find effective and satisfying ways of incorporating ecology into their work. A final point to name concerns the American Catholic background out of which I write. Though I do often refer below to historical and contemporary resources in my home tradition, it will also likely be the case that many of the questions and themes discussed in this paper—including the roles of narrative and affectivity in ecologically focused religious education—will be of mutual concern in other Christian traditions as well.

2 Weaving Christian and ecological narratives into students’ personal stories

Narrative, which is the first domain in this educational approach, can minimally be described as a function of the human mind that utilizes the vehicle of story to develop the key senses of identity, meaning and purpose in life. Psychologist Dan McAdams (1997) describes how narratives play essential and complex roles in human development, including in the formation of worldviews and the integration of life experiences into a coherent sense of self. Given their power to shape how we come to see and interact with the world, it is unsurprising that narratives are also recognized as having a key role in determining behavior as well as promoting moral development. As ethicist Steven Bouma-Prediger observes, “the kind of person we have become depends on the stories we identify with.

Stories shape our character, and thus all human action is shaped in terms of narratively formed character” (2016, p. 23).

Narrative in the last 30 years has also been underscored as a vital domain of learning in religious education. Groome, who refers to his “shared Christian praxis” approach to religious education as “dialogue and dialectical hermeneutics between [students’] stories/visions and the Christian community’s Story/Vision” (1991, p. 109), recognizes several reasons why stories can serve as a powerful vehicle for transmitting Christian teaching:

We are engaged by a story well told. A ‘good’ story is a mirror of life in which we find ourselves reflected.... Presented in a system of ideas, the Christian faith tends to promote debate or at best discussion. When symbolized by the metaphors of Story and Vision and made accessible in a narrative language pattern, the tradition appears more ongoing and lifegiving, less reified or finalized, more ‘something to talk about.’ (1991, pp. 141–2)

Anne Streaty Wimberly is another author who has developed a narrative-based African American method for religious education that centers on a process of “story-linking” (2005, p. xi), whereby students derive meaning and inspiration for their lives by linking their personal stories of faith with stories from Scripture and the African American Christian tradition. In the approaches of both these authors, religious educators engage students in a dialogical learning process, helping them put their personal narratives into conversation (or “linking” them) with communally-rooted stories from religious tradition that touch on questions of ultimate value, purpose, and meaning in life. Story-linking practices in religious education thus are capable of helping to shape the vantage points from which students see and understand the world, including their foundational sense of what it means to be in relationship to other people, to the non-human world, as well as to God.

Story-linking methods such as these have yet to be considered for their potential to inform a narrative-based approach to ecological religious education. In this section I explore the contours of one such approach, using the metaphor of “story weaving” to illustrate how broader narratives concerning God and creation can become linked or knitted together with students’ own stories and identities through a process of reflective learning. Under the first two headings below I explore some potential sources of these larger communal narratives, originating both from Christian tradition as well as the modern sciences, which can be taught to students in order to reveal what ecology and the human-nature relationship have to do with Christian faith and living. In the third and final part, I then describe how religious educators can help students to fruitfully engage and connect their own narratives with these larger communal stories, in a process that can potentially lead them to form stronger and more faith-based relationships with the natural world.

2.1 Teaching stories of Christian faith

Stories from Christian tradition can become a distinctive asset for ecological religious education insofar as they shed light on the linkages between ecology and Christian life. Narratives of faith can function in significant ways in the lives of students, for instance by providing religious meaning to their experiences of the natural world, in addition to orienting them to practices of ecologically integrative discipleship. In the space below, I explore some particularly demonstrative examples of narratives from Christian tradition that can play a key role in shaping students’ own worldviews and personal narratives concerning

what it means to be in relationship with the natural world within the context of religious faith.

One important source to consider for supplying these types of narratives is the relatively new area of ecological theology, a contextual form of theology that has grown significantly in the last two decades. Works of ecological theology are generally concerned with theological reflection on the emerging picture of the universe as offered by the natural sciences, as well as determining what Christian theology can and should say in response to environmental harms resulting from human exploitation and neglect. To glimpse the potential of ecological theology to serve as a resource for Christian education, we can briefly turn to the example of Pope Francis' encyclical letter *Laudato si'* and its treatment of several powerful Christian narratives through an ecological lens.³ To focus on *Laudato si'*'s telling of the story of Jesus in particular, one theme that Pope Francis highlights is how Jesus' historical life was one lived "in full harmony with creation," whose "appearance was not that of an ascetic set apart from the world, nor of an enemy of the pleasant things of life.... He was far removed from philosophies which despised the body, matter and the things of the world" (2015, 98). Pope Francis presents several evocative images from Jesus' life to demonstrate its ecological dimensions and implications, including this one from the section of *Laudato si'* entitled "The Gaze of Jesus":

The Lord was able to invite others to be attentive to the beauty that there is in the world because he himself was in constant touch with nature, lending it an attention full of fondness and wonder. As he made his way throughout the land, he often stopped to contemplate the beauty sown by his Father, and invited his disciples to perceive a divine message in things. (Francis 2015, no. 97)

With respect to religious education, it is valuable to recognize how these aspects of the story of Jesus can potentially be transformative to students' perceptions of and interactions with nature. Whether in offering a model of Christian discipleship that extends to include one's relationship with creation, or guidance for how to approach the natural world with open senses and a heart ready to experience the presence of God, an ecological perspective on Jesus' story can powerfully reveal to students how one's personal relationship with the natural world is integral to the commitments of Christian faith and living.

Another vital source of narratives for educating students about faith and ecology include the many stories of Christian exemplars whose lives display significant love and care for creation. One of the better-known accounts of these ecological exemplars is the story of St. Francis of Assisi (1181/1182–1226), whose beautiful "Canticle of Creation" (ca. 1225) gives voice to the sense of kinship he experienced with creation along with the awareness of God he found in creation's multitude:

Praised be You, my Lord, with all your creatures,
especially Sir Brother Sun,
Who is the day and through whom You give us light.
And he is beautiful and radiant with great splendor,
and bears a likeness of You, Most High One.
Praised be You, my Lord, through Sister Moon and the stars,

³ Among the many other works of ecological theology now available, a few robust examples which may serve as helpful resources include Edwards (2006), Johnson (2014), McFague (2008), Hart (2004), and Lane (1998).

in heaven You formed them clear and precious and beautiful....
 Praised be You, my Lord, through our Sister Mother Earth,
 who sustains and governs us,
 and who produces varied fruits with colored flowers and herbs. (Francis 1982, pp.
 38–39)

A more modern example to consider is the story of Sister Dorothy Stang (1931–2005), who lived her life committed to the defense of the Amazonian rain forests and its indigenous peoples. Sister Dorothy, who was murdered in an attempt to quash the justice she helped fight for, is remembered for often wearing a shirt that bore the motto, “A morte da floresta é o fim da nossa vida” (“The death of the forest is the end of our lives”). In addition to stories of Christian exemplars, educators can also introduce students to stories of exemplars from other faith traditions,⁴ as well as to stories of environmental advocates who do not foreground any explicitly religious commitments in their work.⁵ Teaching students in an interreligious and intercultural perspective about a range of exemplars adds an important component of diversity to this practice of narrative education, while also enabling students to consider and take inspiration from a variety of expressions of environmental concern and consciousness.

2.2 Teaching stories of the natural world

Along with teaching narratives that convey important ways in which Christian faith connects with ecology—including visions of ecological discipleship lived out in harmony with creation, as seen in some of the examples above—ecologically-integrative forms of religious education can also work to provide students with personal and intimate knowledge of the natural world so as to better understand and live in right relationship with creation. Other writers who’ve suggested incorporating ecological learning into religious education include Ayres (2014), who calls such knowledge essential for preparing students to become “good members and caretakers of the commons” (p. 205) that includes all creation, as well as Martin (2010), who refers to learning about the natural world as a potential catalyst for students’ growth towards becoming more aware and responsive members of the whole earth community.

Keeping with the theme of this section, teaching about ecology can also be accomplished with narrative methods. It is true in fact that everything extant in nature—whether it be the entire cosmic order, life on earth, or a particular ecosystem or creature—possesses an unfolding history, a story that can be assembled, told and understood. Furthermore, a parallel point can be made to Groome’s comment presented above around how religious knowledge can be learned and understood in a more dynamic and existentially meaningful way when presented in the form of a story instead of merely a system of ideas; ecological science may also take on qualities of an engaging “mirror of life” when it is related in the language of story, as opposed to a collection of facts about natural systems. As I hope to show, teaching scientifically-informed stories of the natural world in religious education

⁴ Examples of ecological exemplars from other religious or philosophical traditions include Thich Nhat Hanh (Zen Buddhism, b. 1926), Winona LaDuke (Ojibwe (Native American), b. 1959), Hsieh Ling-yün (Buddho-Daoism, 385–433 C.E.), and Henry David Thoreau (American Transcendentalism, 1817–1862).

⁵ Further examples include Rachel Carson (1907–1964), Erin Brockovich (b. 1960), John Muir (1838–1914), and Aldo Leopold (1887–1948).

can be a particularly powerful way for leading students to generative new insights concerning the interconnectedness of the natural world, as well as their own place and role in nature's ongoing story. While exploring some of the practical dimensions of how stories of the natural world might be taught in ecological religious education, in what follows I discuss two versions of nature's story which can be differentiated according to their scales of time and space.

With regard to the more expansive version, one possibility for teaching the story of the natural world in religious education is in what Thomas Berry, Mary Evelyn-Tucker, Brian Swimme have dubbed "the universe story" (Swimme and Berry 1992; Swimme and Tucker 2011).⁶ This is the great story of cosmic history informed by contemporary science, ranging from an origin point known as the "Big Bang" through the formation of galaxies and the eventual advent and evolution of life on earth. As is evident from the following extended quotation, Swimme and Tucker emphasize that to learn this cosmology is in fact to learn a living story that implicates humanity in a vast, emerging and interconnected universe:

We are the first generation to learn the comprehensive scientific dimensions of the universe story. We know that the observable universe emerged 13.7 billion years ago, and we now live on a planet orbiting our Sun, one of the trillions of stars in one of the billions of galaxies in an unfolding universe that is profoundly creative and interconnected. With our empirical observations expanded by modern science, we are now realizing that our universe is a single immense energy event that began as a tiny speck that has unfolded over time to become galaxies and stars, palms and pelicans, the music of Bach, and each of us alive today. The great discovery of contemporary science is that the universe is not simply a place, but a story—a story in which we are immersed, to which we belong, and out of which we arose. (2011, pp. 1–2)

Even from this brief overview, it should be apparent how such a cosmic narrative can provide participants in religious education with a powerful perspective from which to view their place in the vast interconnected community of God's creation. Recently published resources for laypeople on the scientific story of the universe now make teaching some of the basic themes of this narrative a realistic possibility in religious education.

In addition to the sweeping cosmic account, another option for telling the story of the natural world focuses on the more recent natural histories of local places.⁷ Local ecologies of interactions between living and nonliving phenomena in nature, including all of the human influences in the landscape, together give rise to what ecologist and natural historian Tom Wessels calls "an interactive narrative" (1999, p. 21), or the story of humanity's interrelated existence within a local natural ecology. These stories of local ecosystems portray the natural world as it exists around or adjacent to places where people live today, whether in city neighborhoods, suburban towns, or rural villages. To learn the natural history of a local ecosystem is one way for students in religious education to develop what environmental educator David Orr (1992) calls "ecological literacy," or "the capacity to observe nature with insight, a merger of landscape and mindscape" (p. 86). Learning the story of a local ecosystem involves an attunement of the mind with a particular place in

⁶ Other writers who have explored the possibility of teaching the universe story in religious education include Chamberlain (2000), Price (2008), and Martin (2010).

⁷ Ayres (2014) has also discussed the potential for teaching about local ecological knowledge in religious education.

nature, which leads to insight concerning its ecological systems and humans' relationships within them.

One particularly attractive feature of teaching this locally focused version of nature's story is the variety of experiential educational activities that can foster in students a greater sense of intimacy with place. Nature journaling and nature drawing are examples of practices utilized in the field of environmental education to help students learn about local natural history through focused, careful attention to the particularities and interrelationships of living and nonliving features of ecosystems (Zwinger et al. 1999). Through interactive observation, students can be led to discover, experience, and document aspects of local ecologies such as assemblages of plant and animal life, signs of geologic history, and natural processes like the changing of the seasons.⁸ Students can also learn about human relationships with these places, including the histories and contemporary experiences of indigenous peoples, the impacts of European colonization, and the variety of current forms of human presence in the landscape. Learning local stories of the natural world can thus also lead students to a more intimate and embodied kind of knowledge about nature, an important foundation for living a life of ecological discipleship in harmony with the rest of creation.

2.3 Weaving students' personal narratives together with communal narratives of faith and the natural world

As discussed above, narrative-based religious education methods including those developed by Groome and Wimberly follow a story-linking technique which functions by putting larger, communal narratives into dialogue with students' personal stories of religious identity. Therefore, while teaching the two types of narratives just described is an important task for ecological religious education, real growth and change in the lives of students should be seen as coming about through reflection on how these narratives might inform their own ways of seeing and relating to others, to the natural world, and to the Divine. In practice, activities that promote this process of story weaving could be structured to follow didactic teaching activities, giving students the opportunity to reflect on and draw meaning from the communal stories being presented.

Regarding some possibilities for story weaving with narratives from Christian tradition, one is how an ecological perspective on the life of Jesus from a text like *Laudato si'* could prompt students' reflections on the visions of Christian discipleship that are offered in this story, along with how these visions might inform their own lives, stories, and relationships with nature. For instance, how might growing in harmony with creation actually take shape in the particular lives and stories of students? What might it mean for students to consider and potentially incorporate into their own lives a way of listening for the presence of God in creation? What implications might such a spirituality have for how students live out their lives in relationship with the natural world? Similarly, in connection with learning the stories of ecological exemplars from Christian tradition, students can also be led to reflect on the significance of ecology in their own vocational stories. It may be profitable for instance to ask what lessons, values or practices are made available by looking into the

⁸ Religious educators can avail themselves of local resources for learning more about the story of their local ecologies; particularly useful community assets can include nature centers, environmental education centers, land trusts, university extension services, and interpretive staff at state and national parks, as well as quality online and print resources on local natural history.

lives of exemplars like St. Francis of Assisi, or Sr. Dorothy Stang? What might it mean to learn from St. Francis' deep sense of kinship with creation, or Sr. Stang's commitment to justice for people as well as the rest of the natural world? How might students' own stories or experiences of nature resonate with the stories of these figures? By facilitating reflection on exemplar narratives in ways that weave together with students' own stories, religious educators can aid students in re-imagining and renewing their relationships with creation within the context of their faith.

Stories of the natural world can also help inspire reflection and learning in students around what it means to practise a life of ecological discipleship within an interconnected, evolving, and emerging creation. One of the most enlightening lessons for students in reflecting on a scientific narrative of nature might be in coming to see their own lives as an integral part of the much broader and ongoing saga of nature's story. Students might be encouraged to reflect for example on the implications of the universe story for how they perceive their lives in relationship with the community of God's creation, including non-human life, and even with the physical processes of the earth. Echoing Martin (2010, 2015), consideration of the universe story in religious education can open up profound and deeply meaningful questions concerning the place and role of humans within the cosmos, as well as potentially move participants away from paradigms of relationship with creation based on dominance and mastery and towards other modes based on kinship, cultivation, and participation. Similar reflections are relevant to learning the story of a local environment, and the perspective that can be gained from seeing one's life and story as embedded within a local ecological network. Reflective learning practices such as these can lead to a weaving together of students' own stories with stories of the natural world, in a way that transforms their ways of perceiving and relating to nature. In addition, forming these narrative connections with stories of the natural world can also potentially lead students to acquire what theologian Roger Haight (2014, p. 20) has referred to as the virtue of "cosmic humility," based on a recognition of our fundamental interdependence with the rest of creation.

3 Nurturing affection for creation

Tending to the affective dimension of students' relationships with creation is another vital task for religious education, an assertion also made recently by authors including Ayres (2014) and Bouma-Prediger (2016). Along with being an integral dimension of human experience in general, affectivity—as a non-verbal, pre-cognitive, embodied or "felt" way of knowing—deserves an important place in ecological religious education due to its strong ties to moral formation and influence on human behavior towards nature. Emphasizing this point for ecological religious education, Bouma-Prediger observes that, "Although rational reflection is important, the simple fact is that most of our actions are pre-reflective and pre-conscious, a result of having an intuitive and embodied feel for the world" (2016, p. 23). Clayton and Myers (2015), who are key contributors to the nascent discipline of conservation psychology, provide further support for this view in their summary of recent neurobiological and empirical studies which suggest the role of affective knowledge in providing an implicit template for how people see and relate to the natural world. While these perspectives would certainly suggest that making a difference in students' "feel for the world" should indeed be a priority for ecological religious education, few proposals

currently exist for specific practices that can help students develop this particular form of connection with the natural world within the context of religious education.

It is also worth discussing how the field of environmental education can be a useful dialogue partner with religious education around this topic, since the former has tended to stress the importance of affectivity in the education and personal development of students. One important source for this emphasis comes from the biologist E.O. Wilson's landmark theory of "biophilia," or the idea that human beings have an innate, evolutionarily derived capacity to affiliate with other forms of life (Wilson 1984). In light of this view of human nature, environmental educators have argued that a major function of education ought to be in nurturing this innate capacity in students to love and care for the natural world. As David Orr observes:

Were we to confront our creaturehood squarely, how would we propose to educate? The answer, I think, is implied in the root of the word education, *educere*, which means "to draw out." What needs to be drawn out is our affinity for life. That affinity needs opportunities to grow and flourish, it needs to be validated, it needs to be instructed and disciplined, and it needs to be harnessed to the goal of building humane and sustainable societies. (2004, p. 213)

Orr's perspective here, including around the ethical implications of affective education, can provoke some critical questions for ecological religious education as well. How might it be possible for teachers of Christian faith to nurture students' affective ways of knowing and being in relationship with creation? How might a deeper felt connection to nature be linked to growth in students' relationships with God? Through what particular practices can religious educators work to "draw out" their students' "affinity for life," a love for creation that as Orr suggests could potentially effect moral transformation at both the personal and societal levels?⁹ These questions help guide my exploration below of practices for tending to students' felt, embodied relationships with the natural world.

3.1 Christian spirituality and an education of the heart

One resource that has yet to be considered in the religious education literature for its potential contribution to the affective dimension of ecological religious education is Christian spirituality. Generally speaking, many Christian spiritual writers have emphasized the role of the heart in personal formation and living, including such well-known examples as St. Augustine of Hippo, St. Teresa of Avila, and Jean Vanier. Here in particular I wish to focus on another classic figure in Western spirituality, St. Ignatius of Loyola (1491–1556), who I believe can serve as an important resource. Taking up his well-known manual of prayer and spiritual direction known as *The Spiritual Exercises*, a close reading of this text shows Ignatius' distinct appreciation for the role of affectivity in human spiritual development. This is evident for instance in the attention he gives to the affective, felt qualities of spiritual consolation and desolation for guiding the discernment of spirits (*SpEx*, 316–317),

⁹ In addition to Orr, Wilson also highlights the ethical implications of an innate human capacity to affiliate with nature: "In my opinion, the most important implication of an innate biophilia is the foundation it lays for an enduring conservation ethic. If a concern for the rest of life is part of human nature... then on that basis alone it is fundamentally wrong to extinguish other forms of life. Nature is part of us, as we are part of Nature" (1994, p. 362). Wilson points here to the essential relationship between nature connection and nature conservation, or in other words between the affective and the ethical.

as well as his way of describing the purpose of the *Exercises* as a method for aligning one's life to God instead of according to "some disordered affection" (*SpEx*, 21). Another important concept in the vocabulary of the *Exercises* linked to affectivity is that of "interior knowledge," which Ignatian commentators Michael Buckley and Herbert Aphonso both interpret as meaning an affective form of knowing, referring to it respectively as "felt knowledge" (Buckley 1975, p. 95) and as "knowledge of the heart" (Aphonso 2001, p. 17). In Ignatius' *Exercises*, interior knowledge forms in response to a participant's encounters with divine grace, becoming the catalyst for renewed ways of seeing and acting in the world. As I explore below, further engagement with Ignatius' text around the dynamics of interior knowledge, and especially Ignatius' techniques for tending to this facet of human growth, can yield constructive possibilities for an education of the heart in Christian ecological religious education.

3.2 Contemplative and affective learning from Jesus' own relationship with creation

Of the two places in the *Exercises* that are of interest, the first is a series of contemplations of Jesus's life that make up the bulk of the section of the *Exercises* that Ignatius entitles the "Second Week." In these contemplations, the use of the imagination is the special means by which participants encounter and interact with Jesus in different scenes from the Gospels. Ignatius instructs participants "to bring [all] five senses to bear" in these encounters: "to see the persons with the imaginative sense of sight," "to hear with the sense of hearing what they say or could say," "to smell and taste," and so on (*SpEx*, 122–125). These personalized and participatory contemplations of the Gospels—where grace can be understood as working through the participant's imagination—are also oriented toward a transformation of the heart, more specifically a heart that bears greater likeness to the human heart of Jesus. Ignatius makes this clear in the preliminary notes for these contemplations, where he writes that a participant should desire to receive from them "interior knowledge of the Lord who became human for me so that I may better love and follow Him" (*SpEx*, 104). Consistent with Ignatius' text, contemplating Jesus's life in this way can be referred to as a mode of affective education, or an education of the heart, where interior knowledge of the Incarnation is sought that guides a person in new ways of seeing and acting. Michael Ivens describes the affective conversion of the Second Week as a "Christification of outlook" (1998, p. 128), whereby one learns to see and relate to the world through the eyes and heart of Jesus.

The link in Ignatius' *Exercises* between the imaginative contemplation of Jesus's life and the grace of affective growth in Christ can also be examined as a resource for ecologically focused religious education. Of special importance here is the potential for contemplative practices in religious education to foster affective learning that is based on Jesus' own relationship with creation. Ignatian spirituality offers valuable wisdom for informing such an approach to contemplative education that engages students' imaginations in encountering the person of Jesus and learning on an affective or felt level from his ways of being with and loving creation. In practice, teachers can invite students to choose an image from Jesus' life to focus on for a time of contemplative prayer, one that especially communicates his ways of perceiving and relating to the natural world. Students could for instance be invited to join with Jesus as he prays to the Father in the wilderness (Mark 1:35), or listen to him teach about God's compassionate care for all creatures (Matthew 6:25–30; cf. Francis 2015, p. 96), or watch as he lovingly looks upon things in nature like the mustard

tree to symbolize the fullness and beauty of God's Reign (Luke 13:18–19). Works of ecological theology can also furnish images of Jesus that can be useful for this practice. One such image can be taken from a section of the second chapter of *Laudato si'*:

Jesus took up the biblical faith in God the Creator, emphasizing a fundamental truth: God is Father (cf. Mt 11:25). In talking with his disciples, Jesus would invite them to recognize the paternal relationship God has with all his creatures. With moving tenderness he would remind them that each one of them is important in God's eyes: "Are not five sparrows sold for two pennies? And not one of them is forgotten before God" (Lk 12:6). "Look at the birds of the air: they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them" (Mt 6:26). (Francis 2015, no. 96)

Based on Ignatius' method for engaging the heart via the imagination, the practice of contemplating Jesus' life and his relationship with the natural world may help inspire in students a change of heart, or indeed a "Christification" in their outlook on creation. To incorporate this practice into religious education would also seem to support in students what Pope Francis refers to in *Laudato si'* as a process of "ecological conversion," "whereby the effects of their encounter with Jesus Christ become evident in their relationship with the world around them" (2015, no. 217).

3.3 Contemplative and affective learning from the life of creation

Another part of the *Exercises* capable of informing an education of the heart is its culminating prayer known as the Contemplation to Attain Love (*SpEx*, 230–237). An important theme of this prayer is growth in a participant's awareness of God's presence and activity in creation. Importantly, rather than being a form of prayer engaged in through the imagination as during the Second Week, Ignatius directs a participant to bring one's attention to bear directly on creation itself. As part of the Contemplation reads:

I will consider how God dwells in creatures; in the elements, giving them existence; in the plants, giving them life; in the animals, giving them sensation; in human beings, giving them intelligence; and finally, how in this way [God] dwells also in myself, giving me existence, life, sensation, and intelligence; and even further, making me [God's] temple, since I am created as a likeness and image of the Divine Majesty. (*SpEx*, 235)

Ignatius further describes this contemplation, focused on God's continuous creation of oneself and the entire cosmos, to be the cause of a profound movement of the heart. This movement he again characterizes in terms of the reception of "interior knowledge," here as an affective knowledge so full of gratitude that it leads a person to desire "to love and serve the Divine Majesty in all things" (*SpEx*, 233). In this final prayer of the *Exercises*, the Contemplation to Attain Love is meant to lead a participant to intimate knowledge of God's creative presence at the heart of all things, which in turn can inspire a committed love for creation along with the desire to serve.

Translating this prayerful exercise into a religious education setting, the Contemplation to Attain Love suggests the potential for affective growth through a deeper and more habitual attunement to God's presence in creation. Such a practice would also resonate with Groome's view that Christian education ought to nurture a "sacramental consciousness" (2011, p. 100) in students, or the capacity to perceive and encounter God in the

ordinary and everyday. As a useful resource for practice, religious educators can draw from the growing field of ecological spirituality, including a number of works that describe approaches or styles of relating to the Sacred in nature.¹⁰ In a simple way, though nonetheless based on an ancient Christian spiritual practice,¹¹ this could include orienting students to engaging with the natural world in the same prayerful spirit as they might engage with Scripture in the well-known spiritual practice of *lectio divina*, practicing a kind of deep spiritual listening and attentiveness to God's Word as it is communicated in the natural order. Practices of contemplative engagement can also be incorporated with other practices such as learning the story of a local environment as discussed above, or gardening, which can give students the opportunity to encounter plants, animals, and other elements of the natural world through a spiritual lens. Building on the spirituality of the Contemplation to Attain Love, practices of contemplative engagement with the natural world can help foster in students the kind of affective consciousness towards creation that is classically described in the words of the poet Gerard Manley Hopkins: "The world is charged with the grandeur of God.... There lives the dearest freshness deep down things..." (2009, p. 128).

4 Cultivating the ecological virtues

A final consideration for this paper is how a virtue-based approach to ethical education can also be integrated with ecological religious education practice, a question that at this point has been explored by only one other author in the field (Bouma-Prediger 2016). As a general definition, a virtue can be considered as an inner trait or disposition of character that guides a person's actions. Bouma-Prediger offers another succinct definition in remarking that, "a virtue-based approach to ethics is quite simple: what we do depends on who we are" (2016, p. 23). Theological traditions have of course long recognized the place and importance of the virtues in Christian faith and living, with ethicist Nancy Rourke providing the overarching view from a Catholic perspective that, "In Catholic virtue ethics humans work in cooperation with God's grace to shape our best selves, discerning who and how our best selves could be, and then working our way toward that becoming" (2010, pp. 222–223). According to religious educators such as Manning (2012), the emphases on personal identity and character development inherent in their cultivation make the virtues a fitting area of focus for religious education programs charged with forming persons for Christian discipleship.

While virtues have traditionally been understood as characterological traits that orient persons' actions towards a *telos* of human flourishing in both personal and communal terms (Sandage and Hill 2001), in the last 30 years some ethicists have extended their scope to include the flourishing of the natural world as well, in what are referred to as the ecological or environmental virtues (Jordan and Kristjánsson 2017). Authors such as Louke van Wensveen (2000) have generated extensive catalogues of ecological virtues (such as benevolence, care, earthiness, justice/ecojustice, and living lightly on the Earth) and vices (or qualities that stifle human and ecological well-being, such as pride/hubris/self-aggrandizement, racism, and wastefulness). Moral theologians have also taken up consideration of what ought to be some of the distinctively Christian ecological virtues, as qualities that

¹⁰ For robust treatments of ecological spirituality, see Christie (2013) and Lane (2015).

¹¹ The practice of "reading the book of nature" traces back to early Christian spirituality; for an excellent essay dealing with some of the history of this tradition, see Lane (2008).

enable persons to live in right relationship with God's creation. Rourke (2012) for instance has elaborated on the ecological dimensions of the Christian virtues of integrity, wonder, temperance, and prudence, whereas Bouma-Prediger (2010) has explored fourteen Christian virtues in ecological perspective including hope, humility, benevolence, love, justice, and courage. Christian ecological virtues can also be identified from the lives of ecological exemplars from within the tradition, as will be explored a bit further below. Rather than discussing the nature of particular Christian ecological virtues which would be beyond the scope of this paper, in the remainder of this section I expand on two important focal areas of practice for cultivating the ecological virtues in general within religious education. Educators are encouraged to consider which ecological virtues might be most appropriate to emphasize within their particular settings and contexts.

4.1 Exemplars

One important pathway for virtue formation in ecological religious education is the presence of exemplars, or individuals who are seasoned in particular virtues and who are able to concretely demonstrate them in daily life (Rourke 2010). Religious educators themselves would ideally be able to serve as exemplars of some of the ecological virtues, and visibly model habits of living that students can learn from. Stories of ecological exemplars from Christian tradition as were discussed above can also play a useful role in ethical education. Ethicist Brian Treanor (2014) has analyzed for instance how the study of virtuous persons' stories can play a number of important roles in virtue formation, including by inspiring persons with the desire to be virtuous, motivating persons to persevere in virtue, providing examples of particular virtues, and helping persons to "experiment" (p. 160) with living out particular virtues via the imagination. Practically speaking, it is readily possible to imagine how reflecting with students on the stories of ecological exemplars can connect with the formative pathways described by Treanor for leading to growth in the virtues. From among the examples described above, the story of St. Francis of Assisi might demonstrate for example the virtues of attentiveness and awe for creation, whereas the story of Sr. Dorothy Stang could also inspire students around the virtue of justice for creation. Narratives of ecological exemplars can in this way help support and inspire students to cultivate particular virtues for living out more responsible and faith-based relationships with creation.

In addition to a focus on individual exemplars, whole communities can also serve as models of ecological virtues, suggesting the transmission of virtues on a communal scale. With the increasing number of Christian communities who are taking up ecology as an explicit dimension of their missions and apostolates, it is likely the case that many of these could serve as exemplars for guiding and inspiring other communities to adopt similar commitments and values.¹² An example of this in practice could include a religious education class visiting or spending time working with an exemplar community such as Holy Wisdom Monastery, an ecumenical women's Benedictine community in Middleton, WI, who in addition to serving as a spiritual retreat center have also embraced ecological virtues of justice and care for the earth by restoring a large patch of native prairie on their

¹² Several other religious communities that are engaged in ecological projects can be found on the list maintained on the Yale University Forum on Religion and Ecology's website, at: <http://fore.yale.edu/religion/christianity/projects/>. Additional community-based projects are described in McDuff (2010) and Taylor (2009).

property, running environmental education programs, and transitioning to a more sustainable infrastructure.¹³ Exemplar communities such as these can potentially play a powerful role in inspiring other communities of faith to move toward more fully embodying the ecological virtues within their own contexts.

4.2 Practices

A second vital approach to virtue development and formation in religious education is through the use of practices, which are understood by many ethicists and educators as vital to how virtues are developed and maintained—or “habituated”—in persons (Bouma-Preddiger 2016). To take for example the creation and tending of a community garden at a neighborhood parish, it can be seen how this ecological practice when incorporated into religious education can have the potential to teach and form students in ecological virtues such as care for creation (by the activities of cultivating plants and caring for soil), as well as justice for creation (for instance, if the food being grown can be made available to persons without adequate access to fresh produce). A wide variety of ecological practices could potentially be considered for adoption in religious education.¹⁴ As well as engaging in actual practices, Ayres (2014) makes the important point that ecological religious education should also include critical reflection by students on the practices they engage in so as to avoid what she refers to as “the unexamined production of shallow experiences” (p. 212). Reflective dialogue can help students grasp the essential purpose, meaning and values behind practices, which can be an important step towards integrating ecological virtues into their ways of being and acting in the world. By incorporating effective ecological practices as well as opportunities for reflective learning into their community contexts, religious educators can create good conditions for the growth of ecological virtues in students.

Ecological practices in religious education can also help fulfill the important need for instructing students in practical ways of living sustainably within natural systems.¹⁵ Whether by growing food with organic techniques, or engaging in advocacy work for a healthier environment, or conserving water or energy, practices engaged in through ecological religious education have the potential to train students to live in ways that protect and promote the health of the natural world. To ensure that practices are engaged in ways that are of benefit to human and ecological communities, scientifically-informed resources on environmental ethics are an important resource for teachers to consult and have at their

¹³ Justice and care for the earth are named in the community’s mission as posted on its website: <https://benedictinewomen.org/about/mission/>.

¹⁴ To learn more, educators can make use of resources such as Creation Justice Ministries’ list of creation care practices for religious communities, available online at: <http://www.creationjustice.org/blog/52-ways-to-care-for-creation>.

¹⁵ This priority also relates to a critique which has been made by ethicists of virtue-based forms of ethical education, in that virtues in themselves do not provide context-specific rules or guidance for informing moral decision-making on the ground (see for example Jordan and Kristjánsson 2017). A virtuous character, rightly so, must be complemented by the practical know-how for acting effectively for the good of human and ecological communities. Moral psychology researchers Darcia Narvaez and Tonia Bock (2014) have argued along these lines for an approach to ethical education that balances the development of ethical reasoning and judgment capacities in students with the cultivation of the more intuitive and habitual qualities of character that are proper to the virtues. This line of discussion in the field of moral education further suggests that in addition to helping students to cultivate ecological virtues, it is also important that ecological religious education incorporate ways of equipping students with the necessary practical knowledge to inform and guide their actions toward the natural world.

disposal. One example to note of an easily accessible resource is *Healing Earth* (International Jesuit Ecology Project 2018), an online open-access textbook that offers an extensive scientific presentation on contemporary environmental problems as well as sustainable solutions for human actions.¹⁶ Resources such as these can provide the necessary background for helping to ensure that practices incorporated into ecological religious education will have a positive impact, as well as appropriately instruct students in practical ways of living in right relationship with the natural world.

5 Conclusion

This paper has outlined a set of practices for Christian religious education that are designed to teach and form students for living in right relationship with creation within the context of their religious faith. It also attempts to articulate one version of a holistic approach to ecological religious education, which by addressing the multiple ways in which persons relate to the natural world can ideally bring about meaningful change in the lives of students. It is hoped that these proposals will contribute theoretical and practical perspectives for informing future work at the intersection of religious education and ecology. More could be developed as well, especially with regard to how the practices discussed above can be adapted to fit the particular social and ecological contexts of local communities, a task which will rest largely in the hands of educators in charge of crafting and implementing programs.

Given the urgent need for Christian communities to respond to present-day ecological crises, one more concept which I believe can be of use from the Ignatian spiritual tradition is the principle of the *magis*, which commentator Barton Geger (2012) translates as “the more universal good” (p. 16). As a principle to help guide its ministry into the future, consideration of the *magis* may especially press the question of how religious education can contribute to the formation of Christians who are committed to promoting and protecting the health, flourishing and resiliency of all forms of life, and indeed of creation as a whole.

References

- Albrecht, G., Sartore, G., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., et al. (2007). Solastalgia: The distress caused by environmental change. *Australasian Psychiatry*, 15, S95–S98.
- Alphonso, H. (2001). *Discovering your personal vocation: The search for meaning through the spiritual exercises*. Mahwah, NJ: Paulist Press.
- Ammons, E., & Roy, M. (Eds.). (2015). *Sharing the earth: An international environmental justice reader*. Athens, GA: University of Georgia Press.
- Ayres, J. (2014). Learning on the ground: Ecology, engagement, and embodiment. *Teaching Theology & Religion*, 17(3), 203–216.
- Ayres, J. (2017). Cultivating the “unquiet heart”: Ecology, education, and Christian faith. *Theology Today*, 74(1), 57–65.
- Bouma-Prediger, S. (2010). *For the beauty of the earth: A Christian vision for creation care* (2nd ed.). Grand Rapids, MI: Baker Academic.
- Bouma-Prediger, S. (2016). What kind of person would do something like that? A Christian ecological virtue ethic. *International Journal of Christianity & Education*, 20(1), 20–31.

¹⁶ The Healing Earth textbook can be found online at: <https://healingearth.ijep.net/>.

- Bratton, S. (1990). Teaching environmental ethics from a theological perspective. *Religious Education*, 85(1), 25–33.
- Buckley, M. (1975). The contemplation to attain love. *The Way Supplement*, 24, 92–104.
- Chamberlain, G. (2000). Ecology and religious education. *Religious Education*, 95(2), 134–150.
- Christie, D. (2013). *The blue sapphire of the mind: Notes for a contemplative ecology*. New York: Oxford University Press.
- Clayton, S., & Myers, G. (2015). *Conservation psychology: Understanding and promoting human care for nature*. West Sussex: Wiley-Blackwell.
- Dalton, A. M. (1990). Befriending an estranged home. *Religious Education*, 85(1), 15–24.
- Edwards, D. (2006). *Ecology at the heart of faith*. Maryknoll, NY: Orbis Books.
- Francis, (2015). *Praise be to you—laudato si’: On care for our common home*. San Francisco: Ignatius Press.
- Francis, Clare, Armstrong, R., & Brady, I. (1982). *Francis and Clare: The complete works*. New York: Paulist Press.
- Geger, B. (2012). What magis really means and why it matters. *Jesuit Higher Education: A Journal*, 1(2), 16–31.
- Groome, T. (1991). *Sharing faith: A comprehensive approach to religious education and pastoral ministry: The way of shared praxis*. San Francisco: HarperSanFrancisco.
- Groome, T. (2011). *Will there be faith? A new vision for educating and growing disciples*. New York: HarperOne.
- Haight, R. (2014). *Spirituality seeking theology*. Maryknoll, NY: Orbis Books.
- Hart, J. (2004). *What are they saying about environmental theology?*. New York: Paulist Press.
- Hopkins, G. M., & Phillips, C. (2009). *Gerard Manley Hopkins: The major works*. London: Oxford University Press.
- Hoven, M. (2015). Teaching creation: Ancient belief meets modern science. *Journal of Religious Education*, 63(1), 1–12.
- Ignatius of Loyola, Munitiz, J. J., & Endean, P. (1996). *Saint Ignatius of Loyola: Personal writings*. London: Penguin Books.
- International Jesuit Ecology Project. (2018). *Healing earth*. Retrieved from <https://healingearth.ijep.net/>.
- Ivens, M. (1998). *Understanding the spiritual exercises: Text and commentary*. Leominster: Gracewing.
- Johnson, E. (2014). *Ask the beasts: Darwin and the God of love*. New York: Bloomsbury.
- Jordan, K., & Kristjánsson, K. (2017). Sustainability, virtue ethics, and the virtue of harmony with nature. *Environmental Education Research*, 23(9), 1205–1229.
- Lane, B. (1998). *The solace of fierce landscapes: Exploring desert and mountain spirituality*. New York: Oxford University Press.
- Lane, B. (2008). Backpacking with the saints: The risk taking character of wilderness reading. *Spiritus: A Journal of Christian Spirituality*, 8(1), 23–43.
- Lane, B. (2015). *Backpacking with the saints: Wilderness hiking as spiritual practice*. New York: Oxford University Press.
- Louv, R. (2008). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books of Chapel Hill.
- Manning, P. (2012). Invitation to discipleship: Educating for virtue in Catholic classrooms. *Lumen et Vita*, 2, 1–13.
- Martin, M. (2010). Religious education and new earth consciousness: “Let us play”. *Theoforum*, 41(1), 93.
- Martin, M. (2015). The cry of earth and conflict with human cultures: A reflection for Christian religious educators. *Journal of Religious Education*, 63(1), 25–36.
- McAdams, D. (1997). *The stories we live by: Personal myths and the making of the self*. New York: Guilford Press.
- McDuff, M. (2010). *Natural saints: How people of faith are working to save God’s earth*. Oxford: Oxford University Press.
- McFague, S. (2008). *A new climate for theology: God, the world, and global warming*. Minneapolis, MN: Fortress Press.
- McGrady, A., & Regan, E. (2008). Ethics in a global world: The earth charter and religious education. *British Journal of Religious Education*, 30(2), 165–170.
- Narvaez, D., & Bock, T. (2014). Developing ethical expertise and moral personalities. In L. Nucci, D. Narvaez, & T. Krettenauer (Eds.), *Handbook of moral and character education* (pp. 140–158). Hoboken, NJ: Taylor & Francis.
- O’Brien, K. (2014). Balancing critique and commitment: A synthetic approach to teaching religion and the environment. *Teaching Theology & Religion*, 17(3), 189–202.

- Orr, D. (1992). *Ecological literacy: Education and the transition to a postmodern world*. Albany: State University of New York Press.
- Orr, D. (2004). *Earth in mind: On education, environment, and the human prospect*. Washington, DC: Island Press.
- Price, E. (2008). Christian nurture and the new cosmology. *Religious Education*, 103(1), 84–101.
- Rourke, N. M. (2010). God, grace, and creation: Shaping a Catholic environmental virtue ethic. In P. Rossi (Ed.), *God grace and creation* (pp. 222–234). Maryknoll, NY: Orbis Books.
- Rourke, N. M. (2012). A Catholic virtues ecology. In C. Z. Peppard & A. Vicini (Eds.), *Just sustainability* (pp. 194–204). Maryknoll, NY: Orbis Books.
- Sandage, S., & Hill, P. (2001). The virtues of positive psychology: The rapprochement and challenges of an affirmative postmodern perspective. *Journal for the Theory of Social Behaviour*, 31(3), 241–260.
- Swimme, B., & Berry, T. (1992). *The universe story: From the primordial flaring forth to the ecozoic era—A celebration of the unfolding of the cosmos*. San Francisco, CA: HarperSanFrancisco.
- Swimme, B., & Tucker, M. (2011). *Journey of the universe*. New Haven: Yale University Press.
- Taylor, S. (2009). *Green sisters: A spiritual ecology*. Cambridge, MA: Harvard University Press.
- Thurmond, G. (2013). Ecology and Mary: An ecological theology of Mary as the new Eve in response to the church's challenge for a faith-based education in ecological responsibility. *Catholic Education: A Journal of Inquiry and Practice*, 11(1), 27–51.
- Treanor, B. (2014). *Emplotting virtue: A narrative approach to environmental virtue ethics*. Albany: State University of New York Press.
- Wensveen, L. (2000). *Dirty virtues: The emergence of ecological virtue ethics*. Amherst, NY: Humanity Books.
- Wessels, T. (1999). *Reading the forested landscape: A natural history of New England*. Woodstock, VT: Countryman Press.
- Wilson, E. (1984). *Biophilia*. Cambridge, MA: Harvard University Press.
- Wilson, E. (1994). *Naturalist*. Washington, D.C.: Island Press.
- Wimberly, A. (2005). *Soul stories: African American Christian education*. Nashville, TN: Abingdon Press.
- World Wildlife Foundation. (2018). *Living planet report 2018: Aiming higher*. Grooten, M. and Almond, R.E.A. (Eds.) Gland, Switzerland: WWF International.
- Zwinger, A., Tallmadge, J., Leslie, C., Wessels, T., & Orion Society. (1999). *Into the field: A guide to locally focused teaching*. Great Barrington, MA: Orion Society.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.