



**The “Wicked Problem of Climate Change
What Is It Doing to Us and for Us?”**

Program and Schedule

The Institute on Religion in an Age of Science

63rd Annual Conference, June 24–July 1, 2017

Star Island, New Hampshire

CONFERENCE STATEMENT

The “Wicked Problem” of Climate Change: What Is It Doing to Us and for Us?

63rd Summer Conference of the Institute on Religion in an Age of Science in Partnership with
the Parliament of the World’s Religions

Climate change is a “wicked problem” with overlapping causes and consequences in economic, ecological, ethical, and technological realms. As climate change continues to alter our planet, how can we use this monumental change as an opportunity for societal and spiritual transformation?

“Uncertainty and ambiguity emerge here as resources, because they force us to confront those things we really want—not safely in some distant and contested future, but justice and self-understanding now.” – Sheila Jananoff

What is the way forward? We must confront climate change as a planetary community. It affects every institution, society, public policy, culture and ecosystem into the foreseeable future. Every possible course of action intertwines with issues of international and intra-societal social and economic justice. Climate change is a multigenerational, transnational “wicked problem” with no single, simple solution.

Tasks to be addressed

- Better understand the current scientific expectations for the future of the climate and its impact on our children and on all life.
- Take stock of what we can or can’t control in terms of the consequences of human action.
- Deal with our grief, hope and desires in the midst of great losses and shifts that will occur.
- Recognize the limits and capacities of our evolutionary heritage. Think beyond our current economic and political identities into new ways of imagining and living into the future.
- Move away from anthropocentric thinking and learn to realize our human purposes as part of a finite, planetary community.
- Use the resources of guiding wisdom from the world’s religious and philosophical traditions.
- Formulate compelling narratives of creation care to enable us as persons, groups and cultures to see what needs to be done and have the courage to do it.
- Use new understandings of how we should live to bring about social and economic justice for all in a sustainable earth community.

Coming to terms with what the “wicked problem” of rapid climate change might do for us will take creativity, imagination, and complex, interdisciplinary thinking of organizations like IRAS.

Paul H. Carr, Champion

Emily E. Austin, Cochair

Karl E. Peters, Cochair

Jane M. Bengtson, Coordinator

PRESIDENT'S WELCOME

This is the fourth year I've been blessed to welcome you as IRAS members and friends to our Annual Summer Conference on Star Island. The perspective of history runs through my desire to welcome you into the theme of this week. I hope you might experience an awareness of the creative meandering of historical currents that lead, ultimately, to the IRAS Summer Conference and offer gifts to take with you back to the mainland of your lives.

I hope such an awareness might draw you in, one day, to creating your own current as an IRAS leader who helps create an IRAS conference...

Following are just a few of the historical currents which have drawn us to this week.

- 1. IRAS was born in 1954, in part, out of a concern for the survival of humanity and the planet in a post-WWII and nuclear proliferation era. IRAS meets this week—some 63 years later—in shattered hopes and grief that, after trusting the world was “making progress” in some small way, we are gathered to *revisit those same old 1954 fears*. And how could we have anticipated, when this conference theme was approved in early 2016, the extent to which the US election of that fall would require the conference to grapple with an increasingly politicized view of climate change that is beyond the pale of sanity? Some of our speakers may remind us that such acknowledgment of despair *must take place* if transformation is to follow.

It is good that we gather in embodied community to support each other in that acknowledgment, and grieving, for purposes of transformation.

- 2. In late 2015 the IRAS leadership considered a proposed conference on climate change for this summer, and how to make it a strong draw for folks. We read in the Dec. 2015 edition of IRAS' companion journal since 1965, *Zygon: Journal of Religion and Science*, a collection of articles introduced by Editor Willem Drees with the theme of exploring “Why Do We Disagree on Climate Change?” In that wonderful collection of articles are embedded the provocative ideas which culminated in the particular formulation of this week's theme.

One of these ideas is the fertile notion of climate change as a “wicked problem” - one which draws us into wrestling with the intersections of our various identities and values, and varieties of privilege.

[If you are considering membership in IRAS, note that Zygon is a part of an IRAS membership.]

- 3. In the nineties, Rodney Holmes, IRAS leader, neuroscientist, and father of two young children founded our program for children and youth. This week we acknowledge one of the original members of that program: Emily Austin, who grew to be Co-Chair of this summer's conference, our next Vice President for Summer Conferences, and post-doctoral Research Associate in the Dept. of Natural Resources and the Environment at UNH.

See emilyaustin.com and ask about her current research on soil carbon storage in biofuel cropping systems!

Those of all ages and identities are welcomed and are a blessing to IRAS in this time of perilous division in the world. However, IRAS may be unique among religion and science organizations as one which is intentionally intergenerational. Therefore, may words from Reinhold Niebuhr welcome you, but also encourage you, when able, to bring the next generation with you as you ferry the threshold from the mainland to Star Island!

“Nothing worth doing is accomplished in our lifetime; therefore, we are saved by hope.”

Barbara Whittaker-Johns
President of IRAS

CONTENTS

PRESIDENT'S WELCOME 1
THE STORY OF IRAS 2
PURPOSE OF IRAS 3
IRAS ON STAR ISLAND 4
GENERAL CONFERENCE INFORMATION 5
ARCHI PELAGOS: CONFERENCE YOUTH PROGRAM..... 8
IRAS MEMORIAL SCHOLARSHIP FUND 9
PROGRAM OVERVIEW: DAYS AND TIMES, ABSTRACTS, BIOSKETCHES 10
PEOPLE..... 26
READING LIST 27
IRAS FUND DONORS, 2016–2017 31
SPONSORS 32
PARTNERS..... 33
ACKNOWLEDGMENTS 34

THE STORY OF IRAS

In the late 1940s the American Academy of Arts and Sciences organized a Committee on Science and Values to address topics relating contemporary scientific knowledge to fundamental human concerns about life's morals and meanings. The Committee, which included astronomer Harlow Shapley, neurobiologist Hudson Hoagland, geologist Kirtley Fletcher Mather, biologist George Wald, and Ralph Wendell Burhoe, the executive secretary of the Academy, stated that "we believe that ... the survival of human society depends on the reformulation of man's world view and ethics, by grounding them in the revelations of modern science as well as on tradition and intuition."

Several from this committee accepted an invitation to bring their views to an interfaith group at the Coming Great Church Conference on Star Island in the summer of 1954. Later in 1954, the group from the American Academy accepted an invitation of the Coming Great Church Conference to form the Institute on Religion in an Age of Science, a multidisciplinary society that carried forward the work of both predecessor groups. Other leaders involved in the establishment of IRAS included Brand Blanshard, Edwin Prince Booth, Dana McLean Greeley, Donald Szanthy Harrington, Henry Murphy, Lyman Rutledge, and Malcolm Sutherland. Other early members included Ashley Montagu, B.F. Skinner, Theodosius Dobzhansky, and Ian Barbour.

Since 1954 IRAS has held an annual conference on science, values, and religion, with 57 of those conferences having been held on Star Island, ten miles off the coast of Portsmouth, New Hampshire. IRAS has also conducted—on its own or in collaboration with other groups—conferences in other places: at universities and theological schools and at meetings of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the American Academy of Religion.

In 1965 IRAS joined with the Meadville Theological School of Lombard College (later Meadville/Lombard Theological School) to establish a journal: *Zygon: Journal of Religion and Science*. The first issue was published in March 1966 under founding editor Ralph Wendell Burhoe, director of the newly formed Center for Advanced Studies in Theology and the Sciences (CASTS) at Meadville/Lombard. In 1979, when Karl Peters succeeded Ralph Burhoe as editor, the editorial offices moved to Rollins College in Florida. IRAS, the Center for Advanced Study in Religion and Science (CASIRAS, successor to CASTS), and Rollins College became joint publishers. In 1989 the editorial offices moved back to Chicago under the editorship of Philip Hefner, director of the newly formed Chicago Center for Religion and Science (renamed the Zygon Center for Religion and Science in 1999). During the past quarter century, *Zygon* has been the chief international voice for the scholarly community in science and religion and has greatly strengthened the influence of the IRAS-CASIRAS approach to relating religion and the sciences.

In the summer of 2013, IRAS committed to a major review and renewal of its purpose, structures and processes. This work resulted in another statement of the Purpose of IRAS. It was accepted by the members at the Annual Meeting in 2015. In 2016, the Annual Meeting brought this work to a close with the acceptance of wholesale redesign of our internal structures and processes.

PURPOSE OF IRAS

IRAS is a multidisciplinary society of persons who seek to understand and reformulate the theory and practice of religion in the light of contemporary scientific knowledge, and to provide a forum for discussing issues relevant to that goal. The IRAS Constitution states the formal purpose as follows:

- (1) to promote creative efforts leading to the formulation, in the light of contemporary knowledge, of effective doctrines and practices for human welfare;
- (2) to formulate dynamic and positive relationships between the concepts developed by science and the goals and hopes of humanity expressed through religion; and
- (3) to state human values in such universal and valid terms that they may be understood by all peoples, whatever their cultural background or experience, in such a way as to provide a basis for world-wide cooperation.

Various other statements of the goals and purposes of IRAS have also been articulated over the years. For example, there is one in the back of each *Zygon* which says "IRAS is an independent society of scientists, philosophers, religion scholars, theologians, and others who want to understand the role of religion in our dynamic scientific world."

The IRAS Council, at its 2003 midwinter meeting, adopted the "Campion Statement," so-called because it originated from discussions at the Campion Center in Massachusetts at the 2002 midwinter meeting. The Campion Statement reads as follows:

We at IRAS take the natural world seriously as a primary source of meaning. Our quest is informed and guided by the deepening and evolving understandings fostered by scientific inquiry.

From here, our quests for meaning take us in divergent directions. For some, the natural world and its emergent manifestations in human experience and creativity are the focus of exploration. For some, understandings of the natural world are interwoven with understandings inherent in various religious traditions, generating additional paths of exploration and encounter. As a result, we articulate our emerging orientations with many voices, voices that are harmonious in that we share a common sense of place and gratitude.

We acknowledge as well a shared set of values and concerns pertaining to peace, justice, dignity, cultural and ecological diversity, and planetary sustainability. Although we may differ and hence debate on how these concerns are best addressed, we are committed to participating in their resolution.

In 2015 at the Annual Meeting, the following Statement of Purpose, which emerged from the renewal work, was adopted by the members:

IRAS cultivates a community of informed and respectful inquiry and dialogue at the intersections of science with religion, spirituality and philosophy in service of global, societal and personal well-being.

IRAS is a nonprofit membership organization. Governance is by a volunteer Council whose members are elected from the entire membership. New IRAS members and tax-deductible contributions are always welcome.

IRAS ON STAR ISLAND

Star Island, first settled by Captain John Smith in the early 1600s, is situated in what was known as the best fishing grounds in the Colonial world. Today one can still see the lobstermen setting their traps. A small museum and island tours allow one to recapture this early human history; and tours of the local flora and fauna, tide walks, and a marine biology lab help one appreciate the local environment.

Because it is ten miles offshore from Portsmouth, New Hampshire, Star Island's temperature is usually ten degrees cooler than on the mainland. It thus became an ideal resort setting for one of the premier late-nineteenth-century hotels on the east coast. Today the hotel, along with several cottages and motel-type units, is a conference center run by the Unitarian-Universalist Association and the United Church of Christ; these two religious organizations have formed the Star Island Corporation. Although IRAS is not affiliated with any particular religious organization, we have enjoyed the hospitality of the Star Island Corporation since our first IRAS conference in 1954.

The nineteenth-century hotel and other facilities provide both the charm and the amenities of that period. Rooms are provided with wash basins and water buckets, and in most cases the toilet is down the hall. The Star Island management and its staff of mostly college students—called Pelicans—are first rate in meeting the various needs of guests from infants to octogenarians. A highlight of the week is the Pelican Talent show—a delightful extra from the hard-working staff. And in recent years IRAS conferees have returned the favor with their own talent show on the final night of the conference.

Star Island and other islands in the Isles of Shoals are excellent examples of the rocky New England coast. There are no roads, no cars, no bicycles, no TVs, and one public phone (603-601-0832). But there are rocks, bushes, grasses, nesting sea gulls, crashing ocean waves, sometimes fog horns, and sometimes crystal-clear night skies to explore through telescopes with some of our professional and amateur astronomers (IRAS's second president was astronomer Harlow Shapley). There are opportunities for swimming, rowing, tennis, and ballroom dancing. And the Star Island Book Store and Gift Shop offer books related to the conference theme and other items to remember the week on the island.

In the last few years the Star Island Corporation has launched an ambitious program to obtain grants and capital fund donations to repair, refurbish, and upgrade the facilities. While Star Island strives to maintain its traditional atmosphere of an island retreat, it also is seeking to meet the demands of being an ecologically sound community and while able to bring to conferences like IRAS access to the wider world via the Internet. There has been a significant expansion of IT capabilities and a continuation of the process of making Star a 90% self-sustaining, solar-powered community.

Just as important as the Star Island transitions and conference service upgrades, are the people who come to IRAS conferences from a variety of academic and professional fields, as well as many well-educated "lay persons." Many conferees belong to IRAS, which has about 300 members. Others come because they are interested in how religion relates to science and in the particular topic. There is active dialogue in lectures, discussion groups, conversation on the porch overlooking the harbor and on the rocks, and at the social hour before dinner. For those interested, there are opportunities to meditate and worship together in the stone chapel on a high point of the island, at the gazebo, or in the reflective evening candlelight services.

Those who have been coming for a long time to IRAS conferences believe that the natural setting, the island history, and the people provide a unique opportunity for rigorous, meaningful dialogue regarding religion and values in relation to contemporary science.

GENERAL CONFERENCE INFORMATION

Star Beacon – The *Star Beacon* is an IRAS tradition. This **conference newspaper** appears at breakfast each morning with up-to-date information on the conference and its participants. It provides opportunities for you to respond to lectures and the conference theme, challenge ideas, publish poetry, commentary, and other forms of artistic expression, including humor, all at the discretion of the editor, **Emily Houk**, and as space is available. Contributions from our younger conferees often grace the pages.

Announcements – Because we are sharing the island this year we will make announcements about matters pertaining only to IRAS at the beginning of the morning plenary lecture and at the evening session. General announcements regarding all conferences and Star Island will be made at meals.

The Chalk Board – Besides the *Star Beacon* and Announcements, the schedule for the day is posted in the Oceanic Lobby on a chalk board. This is an easy way to remind yourself about what is happening and when.

Chapel Services – The daily chapel services are an integral part of the week's experience and tie in to the other intellectual activities taking place throughout the week. **Mary Westfall** has a thought-provoking week of services planned. You will not want to miss them. Chapel services take place every day from 8:40–9:15 A.M.

Small-Group Discussions – Small groups will be formed Saturday evening and continue throughout the week. A primary task will be to develop various types of effective communications that can facilitate discussion and action beyond Star Island. Also, the small groups will meet beginning with the morning break to formulate questions with which to engage the morning dialogue speakers.

Ministry Group – This group has been meeting for several years and includes all who are committed to some form of lay or ordained ministry. It considers issues raised at the conference by science and religion-theology-spirituality. Participants reflect on the ways that they can take what they have learned (as individuals and in our group discussions) back to those they serve, whether in a religious community or in the wider community. You are welcome to join the ministry group instead of your regular group to which you are assigned.

Science Lectures – The science of climate change is very complex, involving not only changes in the planet and its inhabitants but also in our capacities as humans to respond. This year four lectures will highlight some of the scientific questions and ways in which we might address these questions.

Shapley-Booth Lectures – Fellowships to honor the memory of the first two presidents of IRAS, Edwin Prince Booth and Harlow Shapley, are awarded to the best proposals in response to the conference call for papers. Proposals are evaluated blind by a three-person, anonymous jury. In addition to being recognized, Shapley-Booth Fellows receive financial assistance from the Shapley-Booth Fund for their room and board and for some travel expenses.

Art Workshop – Stretch your mind, learn to see in new ways, and express yourself through art with the guidance of artist Jane Penfield. This experience will be in the Art Barn from 2:00–4:00 P.M.

Recreation – You may start your day early (6:30 A.M.) with coffee on the front porch or a Polar bear dip at 7:00 am. Star Island has many opportunities for recreation: talking, thinking, napping, reading, walking, and playing. Star Island's inviting setting offers rich opportunities to renew, refresh, and nurture body, mind, and spirit. Recreational activities abound, including rowing,

swimming, arts and crafts, softball game against the Pelicans, a trip to nearby Appledore Island, and various Island tours. Be sure to check the announcement board in the main lobby for daily activities.

IRAS Work – IRAS is a community with a life that extends throughout the year. We take the opportunity of being together on Star Island to catch up with one another, to undertake the business that must be done. In addition to the IRAS Annual Meeting and Council Meetings, there are five Working Groups: Member Engagement, Organizational Relationships, Summer Conferences, Administration, and Finance. All IRAS meetings are open to any interested person, whether or not you are a member of IRAS. We will welcome you. Meeting times will be announced and posted on the chalk board.

Social Hour – takes place at the end of afternoon activities, from 5:30–6:30 P.M. in Newton Center for an hour of libations, snacks, socializing, and, often, music. Alcohol is provided and depends upon your donations. Please donate generously as you are able. Contact **Mark Kuprych** (the social hour coordinator) for ways you can help.

Dialogue with the Dialoguers – After dinner and often during sunsets, the two morning presenters will be in Elliott Hall to engage in informal dialogue. 7:30 to 9:00 P.M.

IRAS Choir – The Choir is a longstanding tradition at conferences. Rehearsal is each day from 7:30–8:30 P.M. in the Pink Parlor. The choir sings at morning chapel services later in the week, at the Friday evening banquet, and at the Talent Show. Choir director **Jane Penfield** and music director **Frank Toppa** are a great professional team, who enjoy working together and making music with the IRAS choir.

Frank Toppa is the Music Director at the Unitarian Universalist Meeting House of Chatham, MA, and music teacher at Belmont Day School, Belmont, MA. He has a Bachelor's degree in music education from the Hartt College of Music and Masters' degrees in organ performance from UMass Amherst and in musicology from Boston University. Frank has attended many IRAS conferences with his wife Barbara and son Isaac.

Candlelight Services – A long-standing Star Island tradition, the conference program day closes with a short service of reflection in the Chapel. Following the evening-program discussion period, a procession carrying candle lanterns leaves in silence from the end of the porch. The lanterns illuminate the chapel, and those attending remain silent until they return to the porch. In inclement weather, the candlelight service is held in Elliott.

Late-night activities – Some folks head to bed early, others hang around the front porch or the snack bar in good conversation. Movies, dancing, game playing, and other activities often emerge throughout the week. Do what suits you best.

Lobstah – Tuesday evening you are invited to a special lobster dinner. You must sign up at the Front Desk to participate and an additional charge will be added to your bill.

Ice Cream Social – By Wednesday afternoon you may be needing a pick-me-up. So come to Ice Cream Social in the snack bar for your midafternoon ice cream break at 3:30. It is on the house. Enjoy.

Inter-generational Olympics – From 3 to 4 P.M. on Wednesday, there will be an Inter-generational Olympics on the front lawn. Bring your inner child.

Memorial Service – A memorial service for IRAS members who have died during the past year will be held in the Chapel on Friday at 1:45 P.M. Edmund Robinson, Minister at the Unitarian Universalist Meeting House of Chatham, Chatham, MA will lead us in remembering and celebrating.

Banquet – The banquet will be held Friday evening. We will present IRAS awards that evening. Dress runs from casual to a bit formal.

Talent Show – The Talent Show is on Friday evening following the banquet, from 8:00–9:30 P.M. If you would like to participate, especially if you have talent (this is an optional requirement; all hams are welcome), **Joan Hunter-Brody**, the talent show co-coordinator, will be happy to hear from you. Don't wait to sign up!

Star Gazing – The telescope comes out on clear nights after Candlelight. Check with **Dave Klotz** or the announcement board to see if and where we'll be observing.

Appledore Trip – On Tuesday at 1:30 P.M. there is a boat trip to Appledore Island and the Marine Center. ISHRA has arranged it. If there is space, you are welcome to join them at extra cost. Check at the front desk on Sunday.

Shoals Marine Lab Tour – On Wednesday at 1:15 P.M., IRAS and Shoals Marine Lab will be offering a behind-the-scenes tour of the research station on Appledore Island with director and IRAS presenter **Dr. Jennifer Seavey**. Space is limited, so sign up at the front desk. There is a charge of \$25.

12 Step Meetings – Join Ann Stillwater and others for a 12-step meeting, using literature from AA, Al-anon, and ACA (Adult Children of Alcoholics). You are welcome to bring literature from other 12-step programs and there will be time for sharing. On Monday we will have open sharing and on Wednesday welcome respectful sharing of your concept of a Higher Power.

Farewell Party – An informal farewell party will be held on Friday night, an important part of which is to use up any refreshing substances left over from Social Hour.

If you have any **concerns, questions, or suggestions** about the conference, please bring them up with Conference Coordinator **Jane Bengtson**, or with the Program Cochairs **Karl Peters** and **Emily Austin**.

ARCHI PELAGOS: CONFERENCE YOUTH PROGRAM

The Archi Pelagos program takes place in different ways throughout the day.

MORNINGS

Youth meet in morning groups, according to age, during IRAS plenary sessions. The morning program includes activities such as island hikes, rowing or kayaking to Smuttynose, marine lab and island musician visits, art projects, scavenger hunts, games, playground time, and conference-themed, age-appropriate discussion and activities. Two adult Archi Pelagos teachers from IRAS will lead each group. Please SIGN IN and SIGN OUT your child each day, and arrive to pick them up promptly. (Teens will not need pickup.) If your child or teen will not be attending the morning group on a given day, please give his or her teacher a “signed out” sheet, which we will give each parent on Saturday. If your children are not in their groups, and we have not received a sign-out sheet, we will come and find you. Teens may sign themselves in.

Note: We will offer a snack during each morning session. Please make sure your youth's teachers know about any food allergies or other pertinent medical issues.

This year's morning Archi Pelagos teachers are

Ages 3–7: Alice Austin and Susan Treleaven.

Grades 3–6: Jennifer Whitten and Martin Hargrove.

Jr-Sr High: Rick Agran and Nina Habibi.

AFTERNOONS

The afternoon Serendipity Program meeting times will be announced. It offers youth and adults art projects on the porch or lawn games on the front lawn every day except Wednesday. We do not sign children in to this session. Parents are officially responsible for their children during this time, but do not need to be present if they deem their children old enough to participate on their own. These activities will be run by Archi Pelagos staff, in rotation. H el ena and Juliane Gaudet will be assisting with Serendipity activities.

On **Wednesday**, we'll hold our annual Intergenerational Olympics—an IRAS tradition! **Adult participants are encouraged to show support of the coming IRAS generations by joining the fun. We especially invite IRAS members who aren't parents of the current IRAS kids.** Jell-O Drop, Egg Race, or Fortune Telling, anyone?

SOCIAL HOUR

The children's social hour will take place on the dragon playground each day from 5:30–6:30, at the same time as the IRAS adult social hour.

Staff will need parents and conferee assistance. Please sign up to assist with the social hour.

Attending children's social hour is optional, but if your children attends, please sign them in (and out, at the end). The children's social hour snack will be popcorn. If your child cannot eat popcorn, please let us know.

SPECIAL EVENING ACTIVITIES

Evening activities, open to all ages, will be offered from 7:30–8:30 P.M. Saturday through Thursday. A rotation of Archi Pelagos teachers will lead the evening activities. Some offerings include theater games, a s'mores/music/storytelling night, an art project, and Candy Bingo. Adults are welcome to join the evening activities, too! PLEASE NOTE that evening activity locations will vary, depending on the activity. Please check the CHILDREN'S CHALKBOARD OR WHITEBOARD daily, for updated information about the program activities.

We're glad to have you with us. We look forward to a wonderful week!

IRAS MEMORIAL SCHOLARSHIP FUND

The IRAS Memorial Scholarship Fund honors deceased IRAS member, conferees, and members of their families. Donations to this endowed fund are appreciated. The names of those remembered are added to the memorial list. The earnings from the fund support full room and board for two scholars a year.

Applications are made to the chair of the scholarship committee, presently Jane Bengtson. Awardees are decided by a three-person committee. Preference is given to students who are currently pursuing a degree, who are first-time attendees at an IRAS conference, and whose interests are congruent with the purposes of IRAS.

It is expected that scholars will benefit from the intellectual experiences gained by attending sessions and interacting with conference speakers and IRAS leaders. Scholars are also asked to provide some assistance to those running the conference under the guidance of the conference coordinator.

This year IRAS is pleased to support two Student Scholarship Recipients, with funding support from the IRAS Memorial Scholarship Fund. This year's scholars are

Babatunde Ajao is currently attending graduate school at SIT Graduate Institute in Brattleboro Vermont, pursuing a degree in Sustainable Development with a particular focus on issues of Food Justice and Climate Justice. After completing his undergraduate degree in mathematics, he volunteered for a year-long program with WorldTeach teaching chemistry, geometry and business math at a high school in Majuro, Marshall Islands. It was during his time on the Islands that he was able to experience first-hand the effects of climate change, its result, and the urgent need to intervene before it is too late for everyone. We welcome Babatunde to the conference and eagerly look forward to his participation in the dialogue we will share this week.

Lise Miltner has just graduated from the Boston University School of Theology and will be continuing her studies this fall at Brown University, where she will pursue a Ph.D. program in Ecological Ethics and Aesthetics. Lise is interested in religious naturalism as an intersection of science and religion, especially as it pertains to our planet. As she looks ahead to her studies in Ecological Ethics, Lise finds it especially timely and exciting to be a part of this year's conference. Lise, welcome!

To date, contributions to the Memorial Scholarship Fund have been received in memory of the following people:

James Ashbrook	Barbara Avakian	Ian Barbour
Carl Bildorff	Edwin Prince Booth	Mike Brewer
Sanborn Brown	Ralph Burhoe	Warren Busse
Esther Cox	Eugene d'Aquili	Beth Davis
Henry Everett	Tom Fangman	John Fryer
Scout Fuller	Roger Gillette	Ward Goodenough
Joan Goodwin	Dana Greeley	Dorothy Griswold
Harlan Griswold	Norman Hall	Hudson Hoagland
Betty Lau	Normand Laurendeau	Bernard Loomer
Nicole Lopresti	Roy Morrison III	Frances Nesbitt
Ton Olson	Bill Orme-Johnson	Lyman Page
Carol Peters	George Riggan	Kenneth Roberts
Richard Schlegel	Sally Schlegel	Karl Schmitz-Moorman
Harlow Shapley	Harold K. Shilling	Bob Sorensen
Phil Sturges	Winnie Tomm	George Volckhausen
Paul Walsh	Georgia Wilson	H. vanRenssalaer Wilson
Willie Winternitz	Myra Zinke	

PROGRAM OVERVIEW: DAYS AND TIMES, ABSTRACTS, BIOSKETCHES

IRAS Conferences include several different kinds of presentations and activities as described in the General Conference Information section on page 5. What follows below is a detailed schedule for each day, broken out for morning, afternoon, and evening. See also the weekly schedule on the back cover.

CONFERENCE PROGRAM SCHEDULE

CHAPEL SERVICES

MASTERY, MYSTERY AND MINDFULNESS: THE TASK AND ART OF THRIVING IN A BROKEN AND BEAUTIFUL WORLD

Mary E. Westfall

Sunday–Friday, 8:45–9:15 A.M.

ABSTRACT

What a moment in time to be alive, poised between what is and what is, yet, to be. The daily news offers a dramatic narrative of “things gone wrong,” a planet in distress, a people in denial, testing our capacity for hope and resilience. With tides and temperatures rising, those who are paying attention cannot help but feel a compelling sense of urgency, at times perhaps even disquieting desperation. Then, mingled amidst the fear and uncertainty, there are moments when one is swept up in awe, spell-bound by the mysteries and allure of our planet home, reconnected to the numinous. The dance of sunlight upon water, a vast star-studded night sky, the awesome grandeur of soaring peaks, countless breath-taking encounters that awaken one’s passions and offer healing delight to even the weariest of souls. Many days, like the poet, we ponder whether to “save or savor” the beautiful and broken.

How are we to navigate such a world? What might these times offer as we seek to craft a sustainable future while cultivating lives of joy and amazement?

Our daily chapel services will allow us to engage these themes against the backdrop of the present climate crisis. Drawing upon the knowledge of science, the evocative imagery of poets, mystics and musicians, and the richness of our own experience, we will seek to re-imagine a way of being that honors Earth, engenders hope, and illumines the path to a sustainable, just and holy future.

BIOSKETCH

The Rev. Dr. Mary Westfall serves as Senior Minister of the Community Church of Durham, United Church of Christ, and UNH Chaplain. Raised amidst the Colorado Rockies and the vast expanse of the great plains, nurtured in a loving home and liberal faith community, Mary has always sought to connect her religious beliefs, spiritual practices and love for nature. Serving in urban,

university and small town settings, she has pursued a calling to social justice work that includes environmental stewardship, immigrant rights, women’s health and reproductive choice, and increasingly issues of race, class and privilege. Her commitment to a sustainable future and her hunger to engage in the emerging dialogue between religion and science, led Mary to pursue an interdisciplinary PhD in Natural Resources at the University of New Hampshire, completed in 2001. Her thesis, “Relational Learning for a Sustainable Future: An Eco-Spiritual Model,” sought to offer models of integrating both the knowledge of science and the richness of the world’s spiritual traditions in order to educate the heart and mind toward a sustainable world. That work led her to extensive international travel and engagement with the Global Environmental Network, a consortium of dozens of sustainable communities around the world, also seeking to find new models of living upon earth and with each other. Over nearly 30 years of ordained ministry Mary has been active in religious and academic life, serving as adjunct faculty at UNH for nearly 10 years, offering workshops, retreats and seminars in the New England region and beyond, and continuing to seek to put faith into action on behalf of the vulnerable. Mary is grateful for the inspiration of mentors like Thomas Berry, Matthew Fox, Sallie McFague, Elizabeth Dodson Gray, Bill Mckibben, Fritjof Capra, and a host of colleagues, teachers, religious leaders, and student activists who have helped shape her thinking, enliven her work, and increase her capacity for hope.

ART BARN

Sunday–Friday, 2:00–4:00 P.M.

Jane Penfield

Jane Penfield will instruct the Art Barn Workshop each afternoon from 2:00–4:00. This workshop will take a multimedia approach to drawing and painting, using charcoal, watercolor and pastel to create artistic impressions of our week on Star. Materials will be provided, and all levels of experience are welcome. You are also welcome to bring your own supplies and equipment, if you’d like. Jane is an award-winning pastel artist, whose work has been published in the Pastel Journal. She is an elected member of the Salmagundi Club of New York, a signature member of the Connecticut Pastel Society, and a juried member of

the Pastel Society of America and the Pastel Painters Society of Cape Cod. She is enthusiastic about sharing techniques of working in this wonderful medium with all who would like to participate. Jane's work can be seen on her website at janepenfield.com.

STAR ISLAND DIALOGUES: AN OVERVIEW

Monday–Thursday Mornings and Evenings

From Monday through Thursday we will be engaged in a special feature of IRAS. The morning plenaries will begin with a dialogue between two speakers. Each will give an 18 minute TED-type presentation, after which they will engage in conversation with each other. This will be followed by a break, at the end of which members of small groups will converse among themselves about what the speakers have presented. Each group will prepare one or two written questions. These will introduce conversation for the entire conference until lunch time. This dialogue will continue in the evening session.

SATURDAY NIGHT

WELCOME

Barbara Whittaker-Johns, IRAS President

RESPONDING TO THE DIMENSIONS OF A WICKED PROBLEM: HOW CAN WE GIVE TO THE WORLD?

Karl E. Peters and Small Groups

Elliott, 7:30–9:00 P.M.

ABSTRACT

IRAS cultivates a community of informed and respectful inquiry and dialogue at the intersections of science with religion, spirituality and philosophy in service of global, societal and personal well-being.

One of the tasks of this conference is to find ways for each of us to effectively communicate what we learn during this week to others beyond Star Island—"in service of global, social, and personal well-being."

Tonight we will organize into small groups to begin focusing on the task of effective communication. Here are some questions that may help guide us. And there are no doubt others.

1. Who is our audience: Uncle Fred (a climate change denier), neighbors, a local organization to which we belong, a city, a state, NGOs?
2. What media of communication can we use: elevator speeches, new releases, sermons and talks, essays, body language, stories, painting, music, dance?
3. On what dimensions of the wicked problem of climate change do we wish to focus: education

based on science, life orientations, guiding values, political strategies, psychological issues, economics?

4. Any other questions that by the end of the week may help guide us to move toward new more ecological, just, and peaceful ways of living.

BIOSKETCH

Karl E. Peters (Ph.D.) is Professor Emeritus of Philosophy and Religion, Rollins College, Winter Park, FL, where he taught world religions, environmental ethics, and religion and science. He has been editor and co-editor of *Zygon: Journal of Religion and Science*, and is currently co-chair of the journal's Joint Publication Board. He also is a Past President and Vice-President for Conferences of IRAS.

Peters is the author of *Dancing with the Sacred: Evolution, Ecology, and God* and *Spiritual Transformations: Science, Religion, and Human Becoming*, as well as many essays in science and religion. His current focus is on developing a Christian Naturalist Theology. He lives with his wife the Rev. Marjorie H. Davis at 30 Barn Door Hills Road, Granby, CT 06035, USA. His website is www.karlpeters.net

SUNDAY MORNING

STAR ISLAND DIALOGUES – AN OVERVIEW

Elliott, 9:30 A.M.–12:15 P.M.

During the first part of the morning our Dialogue Presenters will give us brief descriptions of who they are, why they are concerned about climate change, and what they hope we might accomplish as a conference. After the break other speakers will be recognized and Small Groups will gather to reflect on what has been said.

SUNDAY AFTERNOON

WHAT ARE WE DOING TO OUR CLIMATE? WHAT IS IT DOING TO US? WHAT CAN WE DO?

Paul H. Carr

Elliott, 1:45–3:00 P.M.

ABSTRACT

What are we doing to our climate? Since the beginning of the industrial age, emissions from fossil fuel burning have raised carbon dioxide concentrations to 410 ppm. This is 33% higher than in the last million years. This increase is warming our planet via the Greenhouse Effect. At the present rate of carbon dioxide increase, we will reach 800 ppm by 2100. When our earth was at this concentration 40 million years ago, it was so warm that there was no ice. Sea levels were about 300 feet higher than today.

What is climate change doing to us? Dry regions are drier and wet ones wetter. Wildfires are growing, storms more violent, floods setting record heights, and glaciers melting. Natural catastrophes are occurring more than twice as frequently as in 1980. Sea levels could rise as high as 18 feet by 2060. Parts of Earth are increasingly uninhabitable, resulting in millions of climate change refugees.

What can we do? Green not greed! Ethics trumping economics. Let's yoke our knowledge of climate science with the motivational power of spiritual values. We need to reduce our carbon footprints. We now have the option to purchase green electric cars getting the equivalent of 100 miles per gallon and solar PV panels to lower our electric bills. We can support the Citizen's Climate Lobby which advocates charging a carbon production fee resulting in a dividend returned to all. This would stimulate our economy creating millions of jobs and increase the deployment of green solar, wind, and nuclear energy sources. Let's protect our children's future.

Reference, "The beauty of nature versus its utility: the environmental challenge," Chapter 9, *Beauty in Science and Spirit*. Beech River Books, Center Ossipee, NH. 2006.

BIOSKETCH

Our Conference Champion, Paul H. Carr B. S., M. S. MIT; Ph.D. Brandeis U, IEEE Life Fellow, has participated in climate change debates at American Physical Society and IEEE Conferences. He published "Weather Extremes from Anthropogenic Global Warming" in *Natural Science* (2013). The Templeton Foundation awarded Paul grants for the philosophy course "Science and Religion" he taught at U Mass Lowell, 1998–2000. This inspired his book *Beauty in Science and Spirit* (2006). From 1967 to 1995, Paul led a branch of the AF Research Laboratory, which investigated microwave, ultrasound, and SAW (surface acoustic waves). His over 80 scientific papers and 10 patents have contributed to new components for radar, TV, and cell phones. His home page is www.MirrorOfNature.org

CLIMATE CHANGE AND CONFLICTING FUTURE VISIONS

David A. Larrabee, Shapley-Booth Fellow

Eliot, 3:15–4:30 P.M.

ABSTRACT

Dealing with the effects of climate change requires the consideration of multiple conflicting moral claims. The prioritization of these claims depends on the vision of a desired future, eschatology broadly defined. A pluralistic society contains competing visions. These visions, sometimes implicit rather than explicit, shape our decision making by influencing our sense of how things "ought to be." An apocalyptic vision highlights decisions based on fear. A positive vision can see the possibilities of transformation within the present. The wicked problems of climate change are made more

difficult by the lack of a consensus of a positive vision for the future.

The role of future visions in economics, technology, and preservation of nature are explored as secular eschatologies. Two aspects of such visions are especially relevant to climate change decisions: Distributive justice and the relationship between humans and the rest of nature.

A dialog between economics, ecology, technology and religion can make implicit future visions explicit. Two examples will be explored. In the case of distributive justice this paper will explore the question of how much energy is enough. To explore the relationship between humans and the rest of nature this paper will explore the role of land use in climate change decisions. These are but two examples of the many discussions that should be occurring.

Effectively dealing with such wicked problems requires that we scrutinize our visions of how the future ought to be. We must subject these visions to both technical analysis and moral scrutiny. We must examine our vision's dependence on what we do not know and what is beyond our control. Finally, we must foster a dialog between competing visions so that we can forge a path that strives for consent.

BIOSKETCH

David Allan Larrabee was born in Boston Mass. (1955), and is a graduate of Cornell University (BS 1976, MS 1978, PhD Applied Physics 1980). Professor Larrabee did his post-graduate work at Princeton University Plasma Physics Laboratory and became a member of the research staff. Transitioning to the electronics industry he rose to the level of acting VP-engineering. While in industry he earned an MBA from the Philadelphia College of Textiles and Science (1993), now University of Philadelphia, and taught in their MBA program. Prof. Larrabee left industry to return to academia in 1995 and is now a professor emeritus of the physics department at East Stroudsburg University. Professor Larrabee obtained a master's degree in systematic theology from Union Theological Seminary in New York City in 2015. His master's thesis, "Intrinsic Value: A dialog with Birch and Cobb's process meta-ethics" is available online.

Professor Larrabee's interest in science and religion dates back to the 1970's, presenting papers to: the Eco-Justice task force, Sigma Xi, Metanexus, American Scientific Affiliation, American Academy of Religion, Princeton Theological Seminary, and several regional conferences. His current theological project is a close reading of Genesis 1–9 from an eco-theological perspective.

He is a senior member of the IEEE, as well as a member of the AAAS, the American Scientific Affiliation, Society of Biblical Literature, the American Academy of Religion and IRAS. He has been inducted into Tau Beta Pi (Engineering Honor Society) and Delta Mu Delta (Business Administration Honor Society). Professor Larrabee has published peer-reviewed technical articles on: high power particle beams, plasma physics, astrophysics, and electromagnetic compatibility.

David is married to Carolyn Carney and they attend All Angels Episcopal Church in NY City. David enjoys doing Bible studies with students, working the sound board at church, and the Catskill Mountains.

SUNDAY EVENING

ONE SONG: THE SCIENCE OF UNITY

J. D. Stillwater

Elliott, 7:30–9:00 P.M.

ABSTRACT

In the last 150 years, lines of division between traditional fields of scientific study have dissolved into a single overlapping worldview some call The Great Story. That big-picture knowledge base offers vast landscapes ripe with profound religious and spiritual meaning, equalling or surpassing traditional scriptural sources of wonder, mystery, connection, and grace. It also tempts us to conclude, wrongly, that we are only one theory away from extinguishing mystery.

The search for a coherent approach to challenges like climate change is greatly impeded by culture wars, themselves exacerbated by theological divisions that appear to pit science and reason against the human experience of the sacred, profound, and mysterious. Seven Candles is a multi-media project to illuminate profound and sacred implications of the Great Story. The findings of science offer new, deep wisdom for Theists, a “spiritual” relationship with reality for Atheists, and a new evidence-grounded relationship (with everything) for the spiritual-but-not-religious.

A common nature-based “scripture” from science, a shared language that informs all and threatens none of these groups, allows for a more integrated approach to wicked problems of all kinds. This talk, titled “One Song: the Science of Unity” is an outgrowth of Seven Candles, focusing on what scientific knowledge has to say about unity, connection, oneness.

BIOSKETCH

JD Stillwater works as a science educator and administrator at The Circle School in Harrisburg PA. With a life-long passion for science, spirituality, religion, and education, Seven Candles is his part-time mission to promote science as an interfaith source of spiritual inspiration. He is in demand as a lay preacher in UU churches, and Seven Candles has taken him to twelve states and 60 venues in the U.S. and Canada, including a great diversity of religious groups, educational institutions, and NGOs. JD has a B.S. in education from Cornell University, and extensive post-baccalaureate study in physics, chemistry, biology, and earth & space sciences.

MONDAY MORNING

In recognition of a significant financial contribution to IRAS, Monday is to be known as

**Parliament of the World Religions
Day**

FOOD PRODUCTION

Elliott, 9:30–10:45 A.M.

*Can World Food Production Keep up with Population
Growth in the Face of Climate Change?*

Solomon H. Katz

ABSTRACT

*HOPE! Is There Hope? Do I Dare?! Is It Right? Can I?
Are We, Able? Will We Lose It? Can We Ever, Again?
I Hope We Can! What Right Do We Have?
When Will I Know?
Soon, I HOPE?*

–shk June 1, 2017 (see footnote 1)

As a species, *Homo sapiens* has survived climate crises during the extreme periods of glaciation and warming in our geological past. However, it is critical to note that while, as a species, we’ve lived through huge climate change(CC); *we have never done so as a civilization*. In the last period of post-glacial warming (over the last 11–12 thousand years) we evolved an entirely new system of extracting our food from the environment, and our resulting food system now provides the key to supporting an unprecedented mega population and civilization!

Along with the recent success of civilization, we’ve also “fueled” technological complexity, including the development of energy extraction from fossilized fuels, which has accelerated our reproductive success as a species. But we’ve now run afoul of the facts that the CO₂ and related Green House Gasses (GHG) trap the warmth of the sun in our atmosphere and are overheating our planet. In addition, the more recent biological success of *Homo sapiens* as measured by our vast population size has increased the rate of change from the effect of GHG build up to an extent that the entire ecosystem of our planet is at threat from our “success” as a species!

To rebalance our world without creating new problems that are worse than the ones such as extreme weather, rapid warming, polar ice melt and sea level rise, that are already occurring, we will need cooperative approaches where all of humanity works together to carefully decrease our impact on the environment. One major question about our highly evolved food system is: can we unwind the over-success of the FS with a series of simple but effective immediate ways to lower its GHG impact without losing our sense of food justice in the process? There are many constructive things we can do as a species, a global civilization, with nations,

communities, families and individuals spiritually working together that could dramatically lower our carbon footprints and help decrease climate change (CC). To address these issues we thoroughly need to understand what CC is doing to our FS, how current FS practices are adding to and accelerating CC, and invest our efforts in changing our food system in ways that are beneficial to our health and well-being while simultaneously and dramatically decreasing the effects our food system practices have on climate change. I will briefly review the key issues of CC, their impacts on the current FS, and the current CC costs of our current FS practices. To provide concrete examples for how this scaling back will work, I will review foods that encourage us to eat down the human food chain, cut the enormous waste that's in our FS today and provide new anthronomic ways to estimate the impacts of changes we can make that will accelerate the decline in the rate of CC independently of the recent lack of countervailing governmental policies! We need to start a process of the spirit, which our entire species needs to adopt. What better place to do this than Star Island?

Footnote 1. Hopelessness: *"Your opponents would love you to believe that it's hopeless, that you have no power, that there's no reason to act, that you can't win. Hope is a gift you don't have to surrender, a power you don't have to throw away. And though hope can be an act of defiance, defiance isn't enough reason to hope. But there are good reasons." ... "Worse ...is the arrival of climate change, faster, harder and more devastating than scientists anticipated. Hope doesn't mean denying these realities."*

Rebecca Solnit, Friday 15 July 2016 05:00 Guardian 'Hope is an embrace of the unknown': Rebecca Solnit on living in dark times. *"We may be living through times of unprecedented change, but in uncertainty lies the power to influence the future. Now is not the time to despair, but to act" ...* <https://www.theguardian.com/books/2016/jul/15/rebecca-solnit-hope-in-the-dark-new-essay-embrace-unknown>

Also please read Barbara L. Fredrickson's, "Why Chose Hope?" <https://www.psychologytoday.com/blog/positivity/200903/why-choose-hope>

Also See NY Times for an excellent summary of GHG and our share: <https://www.nytimes.com/interactive/2017/06/01/climate/us-biggest-carbon-polluter-in-history-will-it-walk-away-from-the-paris-climate-deal.html>

Also note for the following I'm using Adobe Send & Track for this paper on Global Morality. You can view my file in Adobe Document Cloud by clicking on this link: <https://files.acrobat.com/a/preview/e719a9f9-1923-4a5e-85fb-233a0d64dae5>

BIOSKETCH

Solomon H. Katz is emeritus director and professor at the Krogman Center for Child Growth and Development at the University of Pennsylvania. Katz is also a leading expert on the anthropology of food and served as Editor in Chief of the *Encyclopedia of Food and Culture* Scribner's, 2003 (the Encyclopedia was awarded many major awards including the Dartmouth Medal).

His work in the field of science and religion spans over 40 years with leadership in the Institute for Religion in Age of Science (IRAS), in which he served as president from 1977–79 & 1981–84, president of CASIRAS (1988–2001) and as associate editor and co-chair of the Joint Publ. Board of *Zygon: Journal of Religion and Science*.

Katz also served as secretary of Section H Anthropology of the AAAS and serves on several AAAS-wide committees including the Division of Science, Ethics and Religion. He also served as a Trustee of the Parliament of the World's Religions from 2003–2011 and is an elected fellow of the International Society of Science and Religion. He is an advisory board member of the Ocean Genome Legacy Marine Biodiversity Center of Northeastern University 2014–present. He also serves as the Chair of the American Anthropological Association Task Force on World Food Problems from 2007–present. Most recently, he is co-organizing with Dr. Thomas Reuter a new international program to document and preserve the diversity of indigenous people's traditional food preparation recipes in collaboration with the World Anthropology Association.

The Ethical-Ecological-Economic Dilemmas of Seafoods

Barry A. Costa-Pierce

ABSTRACT

Seafoods are the world's most widely traded foods, but there is little recognition of the ethical, economic, and environmental consequences of this trade. FAO (2014) estimated global seafood production at 167 million metric tons (MMT), with capture fisheries yielding 93 MMT and aquaculture 74 MMT. Global data, however, mask too many important social-ecological impacts and trends. Globally, aquaculture is said to produce "one out of every two fish," but widespread aquaculture development is limited to very few countries, being developed extensively only in Asia. China accounts for 60% of global aquaculture production. With the exception of Norway, aquaculture production has been declining in the EU and the USA. Aquaculture development is virtually unknown outside of Egypt in Africa. The EU and USA are the world's largest seafood importers, in 2014 about \$36 billion and \$20 billion of seafoods were imported, respectively, followed by Asian importing countries (Japan [\$15 billion], China [\$9 billion], South Korea [\$4 billion]). In 2016 the USA imported a record amount of seafood (2.8 MMT=\$19.9 billion), a record amount of shrimp (\$5.7 billion), salmon (\$3.2 billion), crab (\$1.6 billion), and groundfish (\$874 million), contributing to the US large trade deficits (\$750 billion). Over 90% of the seafoods consumed in the US are imported; nearly all the shrimp, tilapia, and tuna Americans eat are imported from developing nations; two thirds of US seafood imports came from China, Canada, Thailand, Vietnam, Indonesia, and Chile in 2014. It is estimated that less than 1% of these imported foods were inspected for contaminants. Per capita seafood consumption in the US and EU is low by world standards, but because of imports, these nations have a disproportionate impact on global seafood markets.

And, the EU and US are also some of the world's largest seafood exporters. Fisheries data show that some "imported" seafoods are caught by US and EU boats, exported for processing, and then reimported back into these nations. Thus, nearly everything the US and EU catches is exported, and nearly everything they eat is imported. This is not only economic insanity. It is widely recognized by the medical community that seafoods are the world's most valuable proteins for human health and wellness. Since the US and EU are not investing in the sustainable development of their national seafood production systems, their massive imports endanger not only their own people's health but also extract vitally important health foods from some of the world's poorest nations. The US and EU also export the large environmental and social costs of unsustainable fisheries and aquaculture being done under the inadequate regulatory, labor and social conditions of many exporting nations. Thus, by relying on imported, "cheap" seafoods, EU and US consumers not only get questionable products health-wise, they also subsidize and externalize the full social and environmental costs of seafoods on their plates. What is required is to increase inspections, tariffs, and taxes on seafood imports, to accelerate investments in fisheries management and restoration, to develop community-based sustainable aquaculture, to invest in seafood processing and value added product development technologies, and to accelerate consumer education on seafoods. Aquaculture has great promise but it needs more socially acceptable and climate-friendly sustainable development models in order to obtain an accelerated social contract. Aquaculture is the popular victim of too much hype as a panacea of poorly informed and trained decision-makers, funders, and the popular press who broadcast too often incomplete messages. For example, the global stagnation of capture fisheries production is often applied broadly to dynamic regional trends such that policy-makers assume that capture fisheries are "dead or dying everywhere". But capture fisheries products enter a common seafood marketplace with aquaculture ones, where marked volume and price competition occur. Capture fisheries provide essential proteins for millions of the world's poor, and accelerated climate change is producing big fishery winners in nations bordering the peri-Arctic seas.

BIOSKETCH

Barry A. Costa-Pierce is the Henry L. & Grace Doherty Professor and Director of the Marine Science Center of Excellence at the University of New England, Biddeford, Maine. Barry has a PhD in Oceanography from the University of Hawaii and an MSc in Zoology from the University of Vermont. In 2017 Costa-Pierce was selected by the Swedish Royal Academy of Agriculture and Forestry as its 4th Wallenberg Professor at the University of Gothenburg. Dr. Costa-Pierce research interests are in "ocean food ecosystems": how fisheries, aquaculture, and seafood value chain systems throughout the world interact locally with marine ecosystems and people. Dr. Costa-Pierce is recognized internationally as one of the pioneers of the field of "Ecological Aquaculture" and

was part of a team that developed the Food and Agriculture Organization's protocols for an "Ecosystems Approach to Aquaculture". Dr. Costa-Pierce has lived and worked as a research scientist and policy expert for R&D organizations throughout Asia-Pacific, Africa and Latin America. He is currently involved in developing new research and education partnership programs in Iceland as a Fulbright Fellow, and in Sweden as the Wallenberg Professor. He was born in a small immigrant town in Southeastern Massachusetts, USA of mixed Azorean-Portuguese ethnicity. He is a Fellow of the American Association for the Advancement of Science.

SMALL GROUP DISCUSSIONS

Elliott, 11:00–12:15 P.M.

MONDAY AFTERNOON

CLIMATE CHANGE AT HIGH LATITUDES: AN "ILLUMINATING" EXAMPLE

Robert S. Pickart

Elliott, 1:45–3:00 P.M.

ABSTRACT

In summer 2011 researchers in the Chukchi Sea north of Bering Strait discovered one of the largest phytoplankton blooms ever recorded in the world Ocean. More surprisingly, it was thriving underneath a meter-thick layer of sea-ice in conditions previously thought to be incapable of supporting a phytoplankton bloom. This is but one example of many unforeseen consequences of climate change at high latitudes – in this case due to the changing nature of the pack-ice and the winds.

This talk discusses some of the ongoing changes to the Arctic system due to our warming climate, with specific focus on the case of the massive under-ice bloom in the Chukchi Sea. It demonstrates how the physical drivers are tightly coupled to the chemistry and biology of the Arctic Ocean, with ramifications through the entire food chain.

The talk also describes the follow-on field program designed to elucidate such under-ice blooms, which highlights some of the challenges—and surprises—of working in the Arctic Ocean.

BIOSKETCH

Robert S. Pickart, Ph.D. in physical oceanography from MIT and the Woods Hole Oceanographic Institution (WHOI), is a Senior Scientist at WHOI. His research focuses on high latitude processes, including air-sea interaction and the exchange of water between the shelves and the deep ocean. He does fieldwork in both the Atlantic and Pacific sectors of the Arctic Ocean, and has recently been investigating ecosystem impacts of climate change.

Bob is the author or co-author of 125 refereed scientific publications. His cruises often provide online education for grade school students and the lay public (see <http://arcticspring.org/>). He recently received the Henry Stommel Research Award from the American Meteorological Society for his pioneering work at high latitudes.

ENSURING ECOSYSTEM SERVICES IN A CHANGING CLIMATE: INNOVATIVE AND COOPERATIVE APPROACHES

Jennifer Seavey

Elliott, 3:15–4:30 P.M.

ABSTRACT

The natural world provides the water we drink, the air we breathe, food we eat, our current climate, important medicine, fun recreation, spiritual renewal, and so much more. These services are collectively called ecosystem services and fall into four broad categories: food and water; regulating (e.g. climate); supporting (e.g. nutrient cycles, pollination); and cultural (e.g. recreation). Ensuring that the natural world's ability to supply all that we need is critical in the face of climate change. Ecosystem management needs to be driven by science. More over management actions need to be understood and supported by human communities. To be resilient, we (our science, our institutions, our communities) must be adaptive and responsive to new knowledge and changing landscapes. This is of course not easy, but it is possible and is happening in some hidden and not so hidden corners of our country.

In this presentation, I will review the concept of ecosystem services and the threats posed by climate change. I will discuss the importance of community understanding and buy in. I will outline a very successful and innovative example of community supported ecosystem service restoration and climate change adaptation from my own research program. Lessons learned from this example can be widely applied across ecosystem services to help communities prepare for the changes that have already begun as a result of climate change.

BIOSKETCH

Dr. Jennifer Seavey is the Kingsbury Executive Director of Shoals Marine Laboratory on Appledore Island, Maine—a joint facility of the University of New Hampshire and Cornell University. She also holds faculty appointments in the Natural Resources Departments at both institutions.

Dr. Seavey is an applied spatial ecologist focused on anthropogenic impacts on threatened marine and avian wildlife, and ecosystem function. Addressing threats posed by sea level rise and habitat shifts resulting from climate change in coastal ecosystems is a large part of her research program. Her academic achievements include: two post doctorate positions at the University of Massachusetts and the University of Florida where she studied climate change impacts to coastal ecosystems;

Ph.D. from the University of Massachusetts, Amherst, Massachusetts in Natural Resource Conservation, where her dissertation focused on the landscape ecology and recovery of the endangered piping plovers; Master's Degree from the University of Washington, Seattle, Washington and; a Bachelor of Science degree in Biology from Lewis and Clark College, Portland, Oregon.

Personally, Jennifer is very committed to the sustainability of our nation's field stations and she serves as a board member for the Organization of Biological Field Stations and the steering committee of the Northeastern Coastal Stations Alliance. When she is not working, you can find her in or on water- salty, fresh and frozen; in a kayak, on skis, with a snorkel. Little known fun fact, she loves the thrill of being dive bombed by the gulls and terns of Shoals!

RESPONDING TO THE DIMENSIONS OF A WICKED PROBLEM: HOW CAN WE GIVE TO THE WORLD?

Small Groups

Various Locations, 4:45–5:30 P.M.

MONDAY EVENING

DIALOGUE WITH THE DIALOGUERS

Elliott, 7:30–9:00 P.M.

An opportunity for informal conversation with the two persons who were in dialogue in the morning session and with ourselves.

TUESDAY MORNING

HOPE AND JUSTICE

Elliott, 9:30 A.M.–10:45 P.M.

The World is About to Turn: Apocalyptic Imagination and Hope for A Planet In Peril

Barbara R. Rossing

ABSTRACT

We are living in what the Greek Orthodox Patriarch Archbishop Bartholomew names as a “*kairos* moment.” Pope Francis and other religious leaders call for radical ecological conversion. Decisions we make in this next decade will be critical for the next ten thousand years, climate scientists tell us.¹ But it is not (yet) too late to change course. Scientists tell us that Earth still has the

¹ See Peter Clark, et al., “Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change.” *Nature Climate Change* 6 (April 2016) 360-69: “Policy decisions made in the next few years to decades will have profound impacts on global climate, ecosystems and human societies—not just for this century, but for the next ten millennia and beyond.”

power to sequester huge amounts of carbon in its soils and forests, through biochar and other low-tech participatory means. We have the technology to bring fossil fuel use to zero.

Religious communities must open up this urgent moment as a space between denial and despair, fostering hope and bold action. My paper will draw on biblical apocalyptic images and stories to envision a renewed world, overturning the injustices of the fossil-fuel "system" in ways similar to how apocalyptic biblical authors envisioned the end of unjust empires in their times. The message of biblical apocalypses is not that the world is about to *end*, but rather that the world is about to *turn*.

The message of hope is particularly important because it is easy to despair, claiming it is too late to find healing for our Earth. Well-known climate skeptic and economist *Washington Post* columnist, Robert Samuelson, for example, seems to have taken this position after years of climate denial.² More and more cynical people may claim it is too late to do anything, which is a convenient way to avoid action and responsibility.

The root meaning of the term "apocalypse" is to expose, to reveal, to make visible. Today, we must make visible what corporate interests try to hide. Imaginative apocalyptic witness and lament can serve a public, even liturgical, function, to expose and climate injustice, and to embody hope. Biblical apocalypses persuade not by logical proofs or arguments, but by creating a "world of vision." They use highly pictorial and visionary language. They give people new eyes to recognize deep truths about the world, empowered with a sense of urgency and hope. They draw on stories from the prophets, the Exodus, and Israel's past to help people "see things they already recognize," as novelist Barbara Kingsolver's describes a rural community's struggle to come to terms with climate chaos, in her novel *Flight Behavior*.

Apocalypses were written at crucial times in Israel's life, to offer what liberation theologian Pablo Richard calls a "spirituality of resistance" in a time of political crisis. They were written to rebuild people's imaginations, when all seemed hopeless. I will argue that we are living in such a time. The apocalyptic imagery of a river of life, and of the tree of life with leaves for healing (Revelation 22:2) is the core image on which I will draw to reimagine and empower hope and healing for our world today.

¹See Peter Clark, et al., "Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change." *Nature Climate Change* 6 (April 2016) 360-69: "Policy decisions made in the next few years to decades will have profound impacts on global climate, ecosystems and human societies—not just for this century, but for the next ten millennia and beyond."

²See Samuelson, "On Climate Change, We Have No Solution" *Washington Post*, May 11, 2014.

² See Samuelson, "On Climate Change, We Have No Solution" *Washington Post*, May 11, 2014.

BIOSKETCH

Barbara R. Rossing (Th.D. Harvard Divinity School) is professor of New Testament at the Lutheran School of Theology at Chicago, is involved in environmental initiatives at the seminary, and is a board member of the Center for Advanced Study in Religion and Science (CASIRAS). She served as pastor of a congregation in Minnesota, director for Global Mission Interpretation for the American Lutheran Church, pastor at Holden Village Retreat Center, Chelan, Wash., and chaplain at Harvard University Divinity School.

Rossing has lectured and preached widely, including events for the Evangelical Lutheran Church in America (ELCA), as well as ecumenical theological conferences. As a public theologian her media appearances have included "CBS Sixty Minutes" as well as The History Channel, National Geographic, Living the Questions, and numerous print and radio interviews.

Her publications include *The Rapture Exposed: The Message of Hope in the Book of Revelation* (Basic Books, 2004); *The Choice Between Two Cities: Whore, Bride and Empire in the Apocalypse* (Trinity Press, 1999); and articles and book chapters on the Apocalypse and ecology.

Re-Envisioning Hope: Anthropogenic Climate Change, Learned Ignorance, & Religious Naturalism

Carol Wayne White

ABSTRACT

Almost daily in the news, scientific studies reveal some new aspect of global warming-related planetary change: glacial melting, coral bleaching, fires, ravaging storms, ocean warming, severe droughts, and other natural disasters. Scientific consensus also indicates that human-induced climate change is real, and that significant, prompt action should be taken on a global scale to slow it down. If scientific consensus on *anthropogenic* climate change is so clear and the threat so real, what might be one hopeful response to help counter the typical ones of overwhelming despair, skeptical denial, and escapist disbelief?

In this paper, I introduce religious naturalism as one contemporary religious response to *anthropogenic* climate change, thereby associating *hope* with the beauty of ignorance, of not knowing ourselves in the usual manner. As a capacious ecological religious worldview, religious naturalism challenges anthropocentric discourses within a trajectory of liberal humanism that have valorized an exceptional human nature. Reframing humans as natural processes in relationship with other forms of nature, this worldview encourages humans' processes of transformative engagement with each other and with the more-than-human worlds that constitute our existence. Accordingly, religious naturalism functions as a fundamental orientation in life, and its practice is inspired by an aesthetic ethical vision that acknowledges the inherent worth of everything alive and all sentient entities.

Drawing on these theoretical insights, I outline the fuller implications of viewing religious naturalism as a

“learned ignorance” that presents hope as humans address the realities of climate change. Through critical questioning of our nature, values, behaviors, and resource uses, humans can begin seeing themselves as part of an interacting, evolving, and genetically-related community of beings bound together inseparably in space and time. As Chet Raymo suggests, “each of us is profoundly implicated in the functioning and fate of every other being on the planet, and ultimately, perhaps, throughout the universe” (Raymo, 2008, 98).

BIOSKETCH

Carol Wayne White is Professor of Philosophy of Religion at Bucknell University, and the author of *Poststructuralism, Feminism, and Religion: Triangulating Positions* (2002); *The Legacy of Anne Conway (1631-70): Reverberations from a Mystical Naturalism* (2009); and *Black Lives and Sacred Humanity: Toward an African American Religious Naturalism* (2016). She has published articles on process philosophy, religious naturalism, and critical theory. White has also received national awards and fellowships, including an Oxford University Fellowship in Religion and Science, a Science and Religion Course Award Program Development Grant (The John Templeton Foundation), and a NEH Fellowship. She is currently writing a new book that explores the tenets of deep ecology and insights of religious naturalism expressed in contemporary American nature poets and writers.

SMALL GROUP DISCUSSIONS

Elliott, 11:00–12:15 P.M.

TUESDAY AFTERNOON

SOIL CARBON TRANSFORMATION

Emily E. Austin

Elliott, 1:45–3:00 P.M.

ABSTRACT

There is more carbon stored in Earth’s soil than in the atmosphere and all living biomass combined. Soil carbon is one of the more dynamic carbon pools with the potential to change relatively quickly in response to changing climate. Soil respiration releases carbon dioxide, the most abundant greenhouse gas, and increases exponentially with temperature. Therefore, a small change in temperature can result in an enormous increase in greenhouse gas emissions to the atmosphere. As permafrost melts, more soil will be accessible to microorganisms and more soil carbon will be respired.

The fate of soil carbon has major consequences for the future climate. Yet our understanding of the processes mediating the retention of soil carbon is still evolving. Estimates of the quantity of soil carbon worldwide vary widely, and the extent to which soil is a potential sink to sequester carbon or will be a source of greenhouse gases in the future is still unclear.

Many earth system models assume that the release of soil carbon to the atmosphere is a simple function of the concentration of carbon in soil and temperature. However, current research suggests that complex interactions between biotic, chemical and physical properties in a given soil govern the size and stability of the soil carbon pool.

Warming will lead to carbon loss from arctic soils: <https://www.sciencedaily.com/releases/2016/11/161130134341.htm>

The effects of changing climate on soil health in agricultural soils are unclear <https://www.sciencedaily.com/releases/2017/01/170111133851.htm>

Deep soils could be a major source for CO₂ emissions: <https://www.sciencedaily.com/releases/2017/03/170309142136.htm>

Are the Paris agreement goals for C sequestration in soils achievable? <https://www.sciencedaily.com/releases/2017/04/170421091701.htm>

BIOSKETCH

Emily E. Austin is an ecosystem ecologist and a soil biogeochemist at the University of New Hampshire. Her research focuses on the interactions between abiotic and biotic components of natural and managed ecosystems especially in a context of global change. Projects address the response of soil microbial communities to multiple climate drivers, the response of carbon cycling to experimental warming and mechanisms for soil carbon storage in a bioenergy system. emilyeaustin.com

ECO-ANXIETY, TRAGEDY, AND HOPE: PSYCHOLOGICAL AND SPIRITUAL DIMENSIONS OF CLIMATE CHANGE

Panu Pikhala, Shapley-Booth Fellow

Elliott, 3:15–4:30 P.M.

ABSTRACT

This presentation addresses the problem of “eco-anxiety” by integrating results from numerous fields of inquiry. While climate change may cause direct psychological and existential impacts, already now vast numbers of people experience indirect impacts in forms of depression, socio-ethical paralysis, and loss of wellbeing. This is not always evident, because people have in response developed psychological and social defenses, including ‘socially constructed silence’. These defenses and coping mechanisms are intertwined with cultural, biological, and religious influences, such as the ancient role of the sky as related to fears and hopes which reach out to the transcendent. Eco-anxiety is linked with fundamental religious and existential themes.

I argue that this situation causes the need to frame climate change narratives as emphasizing hope in the midst of tragedy. Framing the situation simply as a threat or a possibility does not work. Among the many threats, climate change offers a possibility for people, at last, to confront the deep problems of current lifestyles

and socio-economic structures. It challenges people to build resilience and practice active hope.

I draw also from my experiences from Finland in enabling co-operation between natural scientists and theologians in order to address climate issues. Furthermore, we have in Finland interesting new incentives in climate education, including the use of art-based methods.

BIOSKETCH

If Panu Pihkala (b. 1979) has the chance, he's orienteering in Finnish or American forests or playing the piano with friends. Both of these types of activities also help with 'eco-anxiety', his latest research topic.

Pihkala, who works in the Faculty of Theology at the University of Helsinki as a postdoctoral researcher, started his academic career by long studies on history of Christian ecotheology. His monograph *Early Ecotheology and Joseph Sittler (1900–1954)* was published in Spring 2017 by LIT Verlag and he is currently preparing another volume on early ecumenical ecotheology (1948–1975).

During his research periods in Chicago, he gained influences from the Zygon Center which led him to be a founding member in the Finnish high-level discussion group on Religion and Science. Chaired by Lutheran bishop and scholar Tapio Luoma and the prominent climate scientist Markku Kulmala, the group has had a special focus on climate change.

Preliminary results arising from Pihkala's current, interdisciplinary research project on psychological and spiritual dimensions of environmental issues have been published as "Environmental Education After Sustainability: Hope in the Midst of Tragedy" (Global Discourse 1/2017) and "The Pastoral Challenge of Environmental Anxiety" (Dialog Summer 2016). His popular monograph on eco-anxiety and hope will be published in Finnish in Autumn 2017.

Pihkala lives with his wife, who is also a Lutheran pastor and scholar, and two small boys in Helsinki. Living with the children manifests both the hopeful and tragic dimensions of the Anthropocene.

RESPONDING TO THE DIMENSIONS OF A WICKED PROBLEM: HOW CAN WE GIVE TO THE WORLD?

Small Groups

Various Locations, 4:45–5:30 P.M.

TUESDAY EVENING

DIALOGUE WITH THE DIALOGUERS

Elliott, 7:30–9:00 P.M.

An opportunity for informal conversation with the two persons who were in dialogue in the morning session and with ourselves.

WEDNESDAY MORNING

In recognition of a significant financial contribution to IRAS, Monday is to be known as
Star Island Day

CREATION SPIRITUALITY

Elliott, 9:30 A.M.–10:45 P.M.

Creation Spirituality and How the Crisis of Climate Change Challenges Our Species to a New Evolutionary Awakening

Matthew Fox

ABSTRACT

The crisis humanity and the Earth face vis a vis climate change stares all of us in the face whether we be poor or rich, Eastern or Western, religious, agnostic, spiritual or atheist. Mother Nature is bigger than all our ideologies and all our ethnic or national identities. How can spiritual practice that puts a recovery of the sacredness of creation at its core assist the struggle to grow up and fuller evolve as a species? How can we calm the reptilian brain of action/reaction and tap more fully into our mammal brains and their capacity for compassion? How can we develop the courage needed to face denial and anthropocentrism/narcissism as a species? Pope Francis' encyclical "On Care for Our Common Home" is a fine example of how a creation spirituality approach offers much that can deepen our awareness and our action. (It was written in large part by a graduate of Fox's master's program in creation spirituality.)

BIOSKETCH

Matthew Fox holds a doctorate in spirituality from the Institut Catholique de Paris and has authored 32 books on spirituality and contemporary culture that have been translated into 60 languages. Fox has devoted 45 years to developing and teaching the tradition of Creation Spirituality and in doing so has reinvented forms of education and worship. His work is inclusive of today's science and world spiritual traditions and has awakened millions to the much neglected earth-based mystical tradition of the West. His student wrote a large portion of Pope Francis' *Laudato Si, On Care for our Common Home*. Among Fox's books are: *A Way to God: Thomas Merton's Creation Spirituality Journey*, *An Original Blessing*, *The Coming of the Cosmic Christ*, and *Meister Eckhart: A Mystic-Warrior for Our Times*.

Sacred Circle Dance

Ellen Kennedy

ABSTRACT

Ellen Kennedy will be joining Matthew Fox in a dialogue of music and dance, Sacred Circle Dance (SCD), inviting all to join hands in three simple dances: a gathering dance, a centering dance and a closing dance, each

embodying the spirit of our conference and Creation Spirituality. Movements can be modified for physical limitations or choose to be a "sacred witness" and join with your heart and intention. Two left feet welcomed!! There are no mistakes, just variations. If you can't find the dance, trust...the dance will find you!! It is one thing to use the word dance as a metaphor or engage the intellect in dialogue about *The Wicked Problem of Climate Change*; it is quite another to join hands in community and experience connecting mind, heart, body, and spirit, individually and collectively and actually *dance!* As cosmologist Brianne Swimme offers: SCD is an excellent way to access *free energy*." As science teaches, energy follows intention, perhaps a butterfly on the other side of the world might flutter with thanksgiving and join in the dance. *Each dance will be taught, no experience required.*

What is Sacred Circle Dance? Origin: Sacred Circle Dance (SCD) is a worldwide movement originating in collaboration with The Findhorn Foundation, Scotland and the work of Professor Bernhard Wosien, Master Ballet teacher at Munich University. He believed that our earliest and most profound impulse to replicate the creative powers that we sensed within ourselves and our world was through movement. These early "dances" enabled us to identify with the eternal round of creative force in the cosmos while acknowledging the rhythms and cycles of nature and daily life in community. He traveled extensively throughout Europe seeking to retrieve and preserve these early dance forms, specifically in the small, often oppressed villages that continued to hold the dances as sacred. He referred to his work as "Heilige Tanze" or the highest or holy form of dance.

Thoughts from Sacred Circle Dance Participants: "...the amazing thing is the simplicity of these dances. There is no one too clumsy to partake of their grace" ~ "Community dancing is quite simply one of the most beautiful ways for people to be together in a spirit of joy and laughter". ~ "...moving with rhythm in harmony is inspiring and cleansing to heart and mind." ~ "When I circle dance, it is like something that had been locked inside me is released." ~ "Dance brings people together, it heals, includes, unifies, touches, transcends...it can change the world."

BIOSKETCH

Ellen Kennedy embodies the thinking of Matthew Fox and creation spirituality in dance inviting others to do the same building community in group dynamics. She is a Sacred Circle Dance teacher trained and certified at the Findhorn Foundation, Scotland <https://www.findhorn.org> and on the faculty of the Fox Institute of Creation Spirituality in Boulder CO. teaching *The Round Dances of Creation Spirituality*. <http://www.matthewfox.org/fox-institute> Ellen founded the Mt. Holyoke College Sacred Circle Dance Troupe, directing it for four years. She has developed, organized and led SCD workshops, trainings, pilgrimages, events and retreats in the US, Mexico, Scotland, Ireland, Iceland, S. Korea and Israel. As an International Peace Activist, Ellen has danced for peace and solidarity at the Syrian Border; the US Naval Base Gangjeong, S. Korea; Universal Hall, Findhorn and The Abbey, Iona in Scotland; Dewey Square, Occupy

Boston; the Imagine Peace Tower, Reykjavik, Iceland; and with the Santeria Community in Cuba.

For information on the next Sacred Circle Dance Retreat, September 1-3; Pilgrimage to Cuba April 19-25 2018 or bringing Sacred Circle Dance to your organization, group or community contact: Ellen Kennedy dancingspiral@aol.com 978-388-8604

SMALL GROUP DISCUSSIONS

Elliott, 11:00 A.M.–12:15 P.M.

WEDNESDAY AFTERNOON

VISUALIZING CHANGE: ARTISTS WORLDWIDE RESPOND TO CLIMATE CHANGE

Christopher Volpe, Shapley-Booth Fellow

Elliott, 1:45–3:00 P.M.

ABSTRACT

Like canaries in a coalmine, throughout history artists have taken a leading role in presaging, recording, reflecting, and elevating the state of human society and our relationship with the natural world. This presentation uses PowerPoint slides to survey contemporary artists' responses to the reality of climate change with a special emphasis on works at the juncture of technology, eco-awareness, and spirituality.

Great art transcends the political but also acts as a catalyst for change, pricking humanity's collective conscience into spiritual growth and self-awakening. We will explore powerful, inspiring responses from a number of prominent and emerging musicians, sculptors, photographers, painters, and performance, video and installation artists whose visual works acknowledge the enormous risks that human-induced climate change pose to our world.

Additionally, we will become familiar with online resources to learn more, join the network, and encounter larger international grassroots movements of artists working collectively to foster awareness for change.

BIOSKETCH

Christopher Volpe is an artist, teacher, and writer. Volpe studied literature and philosophy at Stony Brook University and poetry at the University of New Hampshire. A period of time teaching art history spurred a transition to painting. Though rooted in landscape, his work treats the natural world as a site of introspection and visual metaphor.

He has exhibited his paintings in galleries, alternative art spaces, universities and museums primarily in New England, including recent shows at the New Bedford Art Museum, the Fitchburg Art Museum, and the Whistler House Museum. He teaches painting out of his studio in Lowell, Massachusetts.

Volpe is a regular contributor to the magazine *Art New England* and has published poetry, scholarly articles, essays, and reviews in diverse regional and national publications. He has taught writing and poetry at the University of New Hampshire and art history at the New Hampshire Institute of Art, Chester College of New England, and Franklin Pierce University. Volpe has received fellowships and grants from MassMoCA/Assets for Artists, the New Hampshire State Council on the Arts, the New Hampshire Humanities Council, and the St. Botolph Club Foundation. He lives with his wife and son in Hollis, New Hampshire.

www.christophervolpe.com

CLIMATE CHANGE IN CONTEXT: STRESS, SHOCK, AND THE CRUCIBLE OF LIVINGKIND

James Clement Van Pelt, Shapley-Booth Fellow

Elliott, 3:15–4:30 P.M.

ABSTRACT

As the enormity of climate change dawns on the world and as a new President exemplifies our collective capacity for denial, the words of a very different President come to mind:

If we know where we are and something about how we got here, we might see where we are tending; and if the outcomes which lie naturally in our course are unacceptable, to make timely change. —Abraham Lincoln

Climate scientists struggle to tell us where we are and warn us where we're headed, with each field report more ominous than the last. Yet how we got here, and why, is a neglected topic at the margins of anthropology, philosophy, and theology. Without shared answers to those seminal questions, how can we know how "to make a timely change" beyond symptomatic remedies applied half-heartedly "in the years that come before the Deluge"?

An ELE (Extinction-level event) is preceded by a period of increasing stress, punctuated by the shock that precipitates the cataclysm. A consensus is developing, expressed in many ways, that our time may see that culmination toward which the Anthropocene epoch has been hurtling since its prehistoric origins. Climate change generates the stress, not by itself but as the galvanizing force that gathers a multiplicity of intertwined environmental and social perils into the unthinkable death spiral "turning and turning in the widening gyre". The shock then arrives via world war, nuclear "event", natural calamity, or cascading failure set off by something remarkably trivial, rippling forth and amplified by technology, until the whole world is shaken to bits—and the curse of the Fermi Paradox is fulfilled.

Yet where science must stop, the humanities offer promise: that this time could be history's crucible, when the countless visions of "a new Heaven and a new

Earth" might come within reach out of necessity, as we confront reality and embrace a sustainable civilization with very different values.

How humanity elects to pass through this epochal crucible will determine Earth's destiny: either the stress and shock producing the next mass extinction and an endless dark age; or a transition to an awakened planetary civilization united by a common purpose, in which humanity conceives of itself not as the top predator species, nor as either the crown or cancer of creation, but the guiding, caring intelligence evolved for the well-being of all livingkind.

BIOSKETCH

James Clement van Pelt co-founded and led Yale's Initiative in Religion, Science & Technology from 2003 to 2012 and since 2003 has been the Yale presence at many conferences and symposia relevant to science vis-à-vis religion and consciousness studies. He has also coproduced eight international conferences at Yale featuring leading scholars in the Euro-American academic community. He has authored, co-authored, edited, and contributed to various articles and books, including *Seeking Home in a Strange Land: True Stories of the Changing Meaning of Home* (Utrecht: Stili Novi Publishers; in press) and *Different Cultures, One World* (Amsterdam: Rozenberg Publishers). He has co-taught science-religion courses at Yale, and has presented lectures on science-religion topics there and at other institutions. He has also co-taught the Stimson Seminar at Yale's MacMillan Center for International and Area Studies. He holds the master of arts in religion (magna cum laude) from the Yale Divinity School, where he was a research fellow from 2003 to 2005 and an instructor/lecturer from 2005 to 2007. He initiated and developed the nation's first cohousing community for 120 families in Tallahassee, which this year celebrates its 43rd anniversary. He has been the co-founder and leader of other alternative institutions such as the Connecticut Folk Festival and Green Expo, Promoting Enduring Peace, and the Center for Participant Education at Florida State University. During his technology career he was the Director of Advanced Solutions for Dun & Bradstreet; authored the first consumer software catalogue for American Express; and served as technology advisor to other corporations, nonprofits, and institutions, including the public school districts of south-central Connecticut as the Senior Technology Advisor of Area Cooperative Educational Services.

RESPONDING TO THE DIMENSIONS OF A WICKED PROBLEM: HOW CAN WE GIVE TO THE WORLD?

Small Groups

Various Locations, 4:45–5:30 P.M.

POSTER PREVIEWS

Newton, 4:45–5:30 P.M.

George Ganz

Mending Our Wicked Ways

ABSTRACT

“Wicked,” meaning evil, immoral, iniquitous, mean and vile, originated from the demonization of ancient religions (“Wicca”) in early Britain. Labeling climate change as “wicked” implies that climate change is a moral issue and humanity is evil. This is not a helpful perspective. It is more fruitful to view climate change as the consequence of economic choices driven by human aspirations. Solving climate change requires that we fully internalize the costs of these choices. This demands collaboration across our entire civilization. We need to nurture, through collective action, the emergence of a species-level appreciation of long term environmental consequences—Gaia must come alive in our shared consciousness. Our analysis needs to be directed towards intrinsic rather than instrumental value; love and compassion must guide our choices. As human behaviors and the needs of the planet become aligned, we will be morally transformed. Perhaps this is what true Wicca wisdom entails.

BIOSKETCH

George Ganz is a writer, philosopher, and retired business executive with a life-long passion for mathematics, science, philosophy, and theology, who blogs at spiralinquiry.org. He has a Bachelor of Science degree with Honors Humanities from Stanford University and has published a number of essays, including “The Tip of The Spear” (4th place, 2014 FQXi essay contest) and “The Empirical Standard of Knowing – Faith Misplaced” (a winner, 2016 IRAS Shapley-Booth fellowship). George directs the Forum on Integrating Science and Spirituality at swedenborgcenterconcord.org and serves on the Board of Promoting Enduring Peace (pepeace.org) a nonprofit organization dedicated to Peace on Earth – Peace with Earth. George and his wife Wenda live in Wayland MA and share five children, four children-in-law, and five grandchildren

Joel and Anne Huberman

Citizen Climate Lobby’s Carbon Fee and Dividend Proposal

ABSTRACT

“Carbon Fee and Dividend” is the policy proposal created by Citizens’ Climate Lobby (CCL) to account for the costs of burning fossil fuels. It’s the policy that climate scientists and economists alike say is the best first step to reduce the likelihood of catastrophic climate change from global warming. CCL’s carbon fee and dividend proposal works like this:

1. *A fee is placed on fossil fuels at the source* (well, mine, port of entry). This fee starts at \$15 per ton of CO2 equivalent emissions, and increases steadily each year by \$10.
2. *100% of the net fees are returned to American households on an equal basis.* Under this plan about 2/3 of all households would break even or receive

more in their dividend checks than they would pay in higher prices due to the fee, thereby protecting middle-class and lower-income households.

3. *A border tariff adjustment is placed on goods imported from, or exported to, countries without an equivalent price on carbon.* This adjustment would both discourage businesses from relocating to where they can emit more CO2 and encourage other nations to adopt an equivalent price on carbon.

A predictably increasing carbon price will send a clear market signal which will unleash entrepreneurs and investors in the new clean-energy economy.

BIOSKETCH

Joel is a retired scientist (biochemist, molecular biologist). He has an A.B. from Harvard College and a Ph.D. from California Institute of Technology. After a postdoctoral position at Stanford and five years at MIT, he spent thirty-eight years working on DNA replication in his laboratory at Roswell Park Cancer Institute in Buffalo, NY. As he moved into retirement, he became interested in climate science and did a lot of reading and studying on the topic. When he moved into RiverMead, a retirement community in Peterborough, NH, he gave a series of ten lectures on climate science to RiverMead residents, learning a great deal more in the process of preparing the lectures.

Anne is a retired science teacher and academic reference librarian. She has an A.B. from Harvard College, an M.S. in Geosciences and Education from Buffalo State College, and an MLIS from SUNY at Buffalo. She worked with the Buffalo Niagara League of Women Voters to encourage Buffalo area towns to join the state Climate Smart Communities program. She learned a lot about climate science from Joel’s lecture series.

Now both Joel and Anne are active members of Citizens’ Climate Lobby (CCL). Joel is a co-leader of the Monadnock Chapter of CCL, and Anne is the secretary. They are doing whatever they can to leave their grandchildren a habitable planet.

Ellen Kennedy

Recent Travels Dancing for Peace and Solidarity—What Can We Learn from Others about Climate Change

ABSTRACT

This poster presentation stems from my recent travels dancing for Peace and Solidarity in Cuba, Iceland, the Syrian Border and Jeju Island, S. Korea. Its intention is to initiate conversation and inquiry on what climate change can do to us and for us in these places on earth.

Havana, Cuba – March 2017

What Cuba Can Teach Us About Food and Climate Change. After the Cold War, Cuba faced many of the agricultural challenges that the rest of the world is now anticipating. By [Raj Patel](http://www.slate.com/articles/health_and_science/future_tense/2012/04/agro_ecology_lessons_from_cuba_on_agriculture_food_and_climate_change.html). http://www.slate.com/articles/health_and_science/future_tense/2012/04/agro_ecology_lessons_from_cuba_on_agriculture_food_and_climate_change.html

The Power of Community: How Cuba Survived Peak Oil (2006) is an American documentary film that explores the Special Period in Peacetime. Its major themes include urban agriculture, energy dependence, and sustainability. The film was directed by Faith Morgan, and was released in 2006 by The Community Solution. <https://www.youtube.com/watch?v=Vs6xoKmnYq8>

Videy Island, Iceland – November 6, 2016

Iceland Rises as Its Glaciers Melt From Climate Change: <https://uanews.arizona.edu/story/iceland-rises-as-its-glaciers-melt-from-climate-change>

What Climate Change Could Mean For The Future Of Iceland Tourism. <https://theculturetrip.com/europe/iceland/articles/what-climate-change-could-mean-for-the-future-of-iceland-tourism/>

Landvernd: leading nature conservation and environmental NGO in Iceland. <http://landvernd.is/en>

Syrian Border – February 1, 2016

Climate Change Helped Spark Syrian War, Study by Craig Welch, for National Geographic. <http://news.nationalgeographic.com/news/2015/03/150302-syria-war-climate-change-drought>

Gore: Syrian Civil War Caused By Climate Change: <http://dailycaller.com/2017/06/01/gore-syrian-civil-war-caused-by-climate-change>

Living in a minefield: the wolves of the Golan Heights: In the Golan Heights, a dangerous minefield provides an unlikely wildlife reserve where wolves are thriving. <https://www.theguardian.com/environment/2015/feb/06/living-in-minefield-wolves-northern-israel>.

Gangjeong, Jeju Island, South Korea – October 2015

Gangjeong Village Story: <http://savejejunow.org>

Gureombi Coastal Sacred Site Gangjeon Village Jeju Island South Korea <http://sacrednaturalsites.org/items/gureombi-coastal-sacred-site-and-gangjeon-village-jeju-island-south-korea>

Korea preps for climate change with tropical fruit by Sohn Ji-young (jys@heraldcorp.com) (google heading for link) The Korea Herald/English Version

BIOSKETCH

See Wednesday morning.

WEDNESDAY EVENING

DIALOGUE WITH THE DIALOGUERS

Elliott, 7:30–9:00 P.M.

An opportunity for informal conversation with the two persons who were in dialogue in the morning session and with ourselves.

THURSDAY MORNING

In recognition of a significant memorial donation to IRAS, Thursday is to be known as

Lyman Page Day

SYSTEMS

Elliott, 9:30 A.M.–10:45 P.M.

Crossing the Great Divide(s): Lessons from Community Organizers on Successful Habits that Foster Change

Peter L. Kelley

ABSTRACT

Seven percent of Americans believe that chocolate milk comes from brown cows.* People often seem to think (or not think) in strange ways, as IRAS conferences have explored. Today we will share proven methods of communicating powerful enough to overcome imperfect knowledge and disagreement, and ways of bridging the partisan divide and the thought-trap of cynicism to make lasting change. Secrets of successful community organizers include working with advocates on their “laser talk” and creating an ongoing structure of support, as veteran organizer Sam Daley-Harris has done for Citizens Climate Lobby and other causes. Campaigners employ opinion research to identify broadly shared values, and microtargeting to economize on delivery. Political operatives insist on workability, and lend case studies in compromise. The human potential movement offers new habits to displace spiraling negativity. As Frances Moore Lappé writes, “We can choose to freeze in fear and retreat. Or we can see ourselves and the world with fresh eyes,” and move into “an upward spiral of empowerment and honest hope.” (*Context is critical. The opening statistic would include anyone whose sense of humor led them to check that answer on a dairy industry survey. Does that change your reaction?)

BIOSKETCH

Peter L. Kelley leads strategic communications for the American wind energy industry—which on a list of 100 climate solutions at Drawdown.org ranks No. 2 (for land-based wind turbines) and No. 22 (for offshore turbines). As Vice President for Public Affairs at the American Wind Energy Association, Peter oversees media relations, social media, grassroots issue campaigns, opinion writing, and multimedia content. He previously owned RenewComm, a PR firm for clean energy companies and nonprofits, and led communications for three national environmental groups and a nonprofit news service on arms control. He began his career as a newspaper reporter in Washington, D.C., the Pennsylvania state capital, and Michigan’s Upper Peninsula. He was communications coach for the University of Maryland’s winning team in the International Solar Decathlon, and taught Public Communications Management at American University.

He has been trained to give the climate science slide show from “An Inconvenient Truth,” and developed a workshop, “Sources of Hope,” based on the writings of Frances Moore Lappé. He holds a Bachelor’s in Government from Harvard University. Peter was a Pelican, 1976–77, and accompanied his parents to Cameroon, Africa, in the Peace Corps, 1963–65. He is a past IRAS Board member.

A Manhattan Project for Clean Energy Innovation

Jim Rubens

ABSTRACT

No wonder I lost two primaries for US Senate in a row. In 2014 I was alone among 108 GOP Senate candidates to openly support published climate science. Despite these political clubbings, I continue to accept that fossil fuel combustion is the primary cause of observed global warming. Atmospheric temperatures are up by 1.8 degrees over pre-industrial levels and, given current trends, will top the 3.6 degree danger level in about 35 years. We need an aggressive policy response, far more than anything accomplished to date.

But things are looking grimmer than ever for those who want federal action on global warming. The Republican Congress and President Trump (who I endorsed and support) are virtually certain to bury President Obama’s signature Clean Power Plan. Even in the off chance it survives, the CPP is “practically worthless” says James Hansen, former head of NASA’s climate data program. The CPP requires approximately nothing beyond what utilities are already doing in replacing coal with gas-fired power plants.

Climate scientists say the emission reductions pledged by 190 nations in the Paris climate accord will barely change earth’s warming trajectory. “The pledges are not going to get even close,” said Sir Robert Watson, former chair of the UN Intergovernmental Panel on Climate Change.

More aggressive policies, such as a revenue-neutral carbon tax are opposed by almost every Congressional Republican and even by the big environmental groups, who are willing to back a carbon tax only if revenues are spent on politically-selected social engineering projects. Cap & trade, because of its byzantine 2,000-page complexity and susceptibility to regulatory capture by special interests, was justifiably buried by Congress back in 2009.

Given worldwide political realities, it’s clear to me that humans will not stop burning fossil fuels until abundant, convenient and cheaper energy sources hit the free market. I am highly confident that these energy sources are coming, but we do not know when or who will invent them. The political and technological solution to global warming is accelerated American energy innovation. Politically, we can build on the widely shared understanding that American prosperity is dependent on domestic innovation.

BIOSKETCH

Jim Rubens attended Dartmouth College and lives with his family in New Hampshire. He has started and run over ten small businesses and makes his living as an investor in commercial real estate and in New England high tech start-ups. Jim served in the state senate, launched debate on passage of New Hampshire’s electricity competition law, and wrote New Hampshire’s charter school and victim restitution laws. For several years during and following his service in the state senate, Jim led fights against ratepayer-financed bailouts of New Hampshire’s largest utility.

Jim has chaired the NH GOP Platform Committee. He was senior policy advisor and spokesman for Senator Gordon Humphrey in his 2002 run for Governor. Jim ran unsuccessfully in the Republican primaries for US Senate in 2014 and 2016, garnering about 20–25 percent of the vote against massively-funded, establishment-backed candidates.

From 2005–2013, Jim served as consultant to Union of Concerned Scientists in matters of clean energy and state and national climate policy.

Jim co-founded and served as President of Headrest, one of New Hampshire’s first substance abuse crisis centers and published a book on addiction psychology. Jim chaired Granite State Coalition Against Expanded Gambling between 2003 and 2013 and is widely credited with building the broad right-left coalition that killed casino gambling in New Hampshire. For his volunteer work, Jim was named the New Hampshire Union Leader’s 2013 Citizen of the Year.

Jim can be reached during the conference at Jim@JimRubens.com and 603-359-3300 text and voice.

SMALL GROUP DISCUSSIONS

Elliott, 11:00 A.M.–12:15 P.M.

THURSDAY AFTERNOON

HOW THE BRAIN ADAPTS TO DISHONESTY

Bill Shoemaker

Elliott, 1:45–3:00 P.M.

ABSTRACT

I will begin with an introduction to the Social Brain Network, also called the Moral Brain Network. These regions of the brain and their interconnections are responsible for our social (or moral) behavior. These include empathy, kindness, respect for others, compassion, in other words, our social conscience.

Recent neuroscientific published reports detail how the amygdala (one of the regions of the in the social brain network) responds to dishonesty, as tested using MRI brain scans in subjects committing self-serving dishonesty. Repeat testing shows how the reduction in amygdala activity is continually reduced by repeated

incidents of dishonesty, indicating a “slippery slope” that can escalate from a small lie.

BIOSKETCH

Bill Shoemaker is a neuroscientist who received his Ph.D. from the Massachusetts Institute of Technology (MIT) and has held positions at the National Institute of Mental Health, the Salk Institute in La Jolla, CA, and currently at the University of Connecticut Health Center in Farmington, CT. He is on the psychiatry faculty, where he teaches residents and medical students, and in the Neuroscience Graduate Program. He has authored more than 100 scientific research publications. Recently, Dr. Shoemaker has been writing concerning the interface between neuroscience and religion.

IRAS ANNUAL MEETING

Elliott, 3:15–4:30 P.M.

This meeting is open to all interested persons. The major items of business are the election of new members to the IRAS Council and the revision of our by-laws. Only persons who are members of IRAS at the beginning of the meeting may vote.

Memberships will be accepted in the lobby each day from 1:30–2:00 P.M.

THURSDAY EVENING

DIALOGUE WITH THE DIALOGUERS

Elliott, 7:30–9:00 P.M.

An opportunity for informal conversation with the two persons who were in dialogue in the morning session and with ourselves.

FRIDAY MORNING

CLOSING PANEL AND WRAP-UP DISCUSSION

Elliott, 9:30 A.M.–10:45 P.M.

Peter Kelley, Facilitator

SMALL GROUP DISCUSSIONS

Elliott, 11:00–12:15 P.M.

FRIDAY AFTERNOON

SCIENCE COMMUNICATION WORKSHOP

Emily Austin

Elliott, 3:15–4:30 P.M.

ABSTRACT

In the age of “alternative facts,” it’s more important than ever that we communicate scientific ideas clearly to a broad audience; we must bring the stories and ideas we have developed during this week into the world. This workshop will draw from the fields of improvisational theater, storytelling, public speaking, and narrative development to help each participant distill an engaging message to communicate to friends and family, to a public audience, or to their local political representatives.

BIOSKETCH

See Emily’s biosketch on Tuesday afternoon.

FRIDAY EVENING

TALENT SHOW

As is our custom, we close the week with a bang-up talent show.

PEOPLE

2017 Conference Planning

Karl Peters	Cochair
Emily Austin	Cochair
Paul Carr	Conference Champion
Tanya Avakian, Anindita Balslev, Jane Bengtson, Marj Davis, Larry Greenfield, Sol Katz, Ted Laurenson, Ruben Nelson, Spencer Stober, Emily Troxell, James van Pelt, Jennifer Whitten, Barbara Whittaker-Johns	

Conference Administrators

Conference Coordinator	Jane Bengtson
Registrar	Marion Griswold

Conference Facilitators

Archi Pelagos Coordinator	Jennifer Whitten
Archi Pelagos Staff	Jennifer Whitten, coordinator
	Rick Agran, Alice Austin, H�el�ena Gaudet, Juliane Gaudet, Nina Habibi, Martin Hargrove, Susan Treleaven

Art Workshop	Jane Penfield
Auction Coordinators	Ruth Orme-Johnson Jennifer Whitten

Banquet Coordinators	Carol Orme-Johnson, Dolly Ferver
----------------------	-------------------------------------

Bell Ringers Coordinator	McGhee Orme-Johnson
Call for Papers Coordinator	Pauline Candaux
Candlelight Coordinators	Muriel Blaisdell Cynthia Kelley

Choir Director	Jane Penfield
Conference Chaplain	Mary Westfall

IRAS Member Reception Coordinators	Steven Gaudet, Pauline Candaux
------------------------------------	--------------------------------

Late-Night Movie Coordinator	Alice Austin
Memorial Service	Edmund Robinson

Music Director	Frank Toppa
Program Book (Orange Book)	David Klotz

Social Hour Coordinator	Mark Kuprych
Social Hour Mixologist	Alice Austin

Star Beacon Editor	Emily Houk
Talent Show Coordinator	Joan Hunter-Brody

Shapley-Booth Fellows	David Larrabee,
	Panu Pihkala, James van Pelt, Christopher Volpe

IRAS Student Scholar	Babatunde Ajao, Lise Meitner
Poster Presenters	George Gantz, Ellen Kennedy Anne & Joel Huberman

IRAS Officers

Barbara Whittaker-Johns	President
Ruben Nelson	Vice Chair of Council
Dan Solomon	Secretary
David Klotz	Treasurer
Jane Bengtson	VP for Administration
Jennifer Whitten	VP for Membership Engagement
Whitney Bauman	VP for Summer Conferences
Karl Peters	VP for Organizational Relationships

Elected Council Members

Emily Austin	Patricia Bennett
Muriel Blaisdell	Roger Brown
Paul Carr	Marion Griswold
Stanley Klein	Sehdev Kumar
Mark Kuprych	Ted Laurenson
Maynard Moore	Tariq Mustafa
Ruth Orme-Johnson	Edmund Robinson
Bill Shoemaker	

Advisors to Council

Marjorie Davis	Historian
Willem Drees	Zygon Editor
Jane Bengtson	Parliamentarian

Honorary Officers

Marjorie Davis	Vice President
Ursula Goodenough	Vice President
Philip Hefner	Vice President
Solomon Katz	Vice President
Karl Peters	Vice President
Nancy Anschuetz	Conference Coordinator

Representatives to Other Organizations

Solomon Katz	AAAS Representative
Karl Peters	CASIRAS Representative
Solomon Katz	Zygon Joint Publications Board
Ted Laurenson	Zygon Joint Publications Board
John Teske	Zygon Joint Publications Board

Others with Official Responsibilities

Archives	Marjorie Davis
Griswold Scholarship	Marion Griswold
Internet	Dan Solomon
Membership Coordinator	Dan Solomon
Newsletter	Jennifer Whitten
Nominating Committee	Jane Bengtson
Student Scholarships	Jane Bengtson
Webmaster	Larry Davis

READING LIST

Saturday

Karl Peters

1. 350 video on Climate Change April 2017. <https://www.youtube.com/watch?v=Nc0QiP4D5IA>
2. **TED talks on Climate Change**
3. Motivating Research on the Science Communications Front: Conveying the Nature and Impacts of Rapid Change in Ice-Dominated Earth systems to Decision Makers and the Public https://geoprose.com/pdfs/motivating_research_high.pdf

Sunday

Paul Carr

What are we doing to the climate? What is it doing to us?

1. MIT Prof. Kerry Emanuel's short book *What We Know about Climate Change*. http://www.amazon.com/About-Climate-Change-Boston-Review/dp/0262018438/ref=sr_1_1?s=books&ie=UTF8&qid=1397128649&sr=1-1&keywords=kerry+emanuel
2. Hansen, James. *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity* (2009).
3. Hansen, James et. al. **Ice melt, sea level rise and superstorms: evidence from paleoclimate ...** www.atmos-chem-phys.net/16/3761/2016/acp-16-3761-2016.pdf March 2016
4. **The United Nations Intergovernmental Panel on Climate Change CLIMATE CHANGE 2013: The Physical Science Basis.**
5. Carr, Paul H. Climate Change Debates and PowerPoint Talks, available at <http://mirrorofnature.org/ClimateIEEEDebatePaper.html>
6. Carr, Paul H. "Weather Extremes from Anthropogenic Global Warming." *Natural Science* Vol 5, No. 1A, 130-132, January 2013.
7. Carr, Paul H. "The Beauty of Nature versus Its Utility: The Environmental Challenge." Chapter 9, *Beauty in Science and Spirit*. 2006. Beech River Books, Center Ossipee, NH. <http://www.mirrorofnature.org/BBookChapterOutline.htm>
8. Shultz, George P. **A Reagan approach to climate change** March 13, 2015

David Larrabee

1. **Economics:** Herman E. Daly contribution to the Oxford online Handbook of Professional Economic Ethics entitled "Ethics in Relation to Economics, Ecology, and Eschatology." There is also an online **youtube interview of Daly**. (https://www.youtube.com/watch?v=_mCKCjfKrUA)
2. **Science & Technology:** William Leiss' 1972 book *The domination of Nature* (republished 1994) especially Part I
3. **Eschatology and Ethics.** The Oxford Handbook of Eschatology ed by Jerry L. Walls (2008) Chapter 32 "Ethics and Eschatology" by Max L. Stackhouse
4. Jurgen Moltmann *Ethics of Hope* © 2012 especially chapter 4.
5. **Indigenous Peoples.** (There are about 370 million indigenous people on earth, who are struggling to find a voice.) **The threatened world of Indigenous peoples** where you can hear their own voices directly (10 min) <https://www.youtube.com/watch?v=MTTUxIgGpRE>
6. **Declaration of the Indigenous Peoples of the World to the UNFCCC COP 17** https://media.wix.com/ugd/75b7f5_d0e70d8c18e04cc1b5175abf5bf9675c.pdf

JD Stillwater

One Song: The Science of Unity

1. **In a hurry? Start here.** (from my blog)
2. <http://www.npr.org/sections/13.7/2011/09/07/140211660/what-is-unity> (including the embedded video)
3. <http://www.npr.org/sections/13.7/2016/08/10/489470208/the-porous-boundary-between-science-and-the-mysterious>
4. **The Play**, song by Peter Mayer
5. **Africa**, song by Peter Mayer
6. https://en.wikipedia.org/wiki/Most_recent_common_ancestor (skim; browse links)

Monday

Solomon Katz

1. Climate Action—World Food Program <http://www1.wfp.org/climate-action>
2. Climate Change Impacts on Global Food Security <http://science.sciencemag.org/content/341/6145/508.full>
3. Finland voices concern over US and Russian climate change doubters https://www.theguardian.com/world/2017/may/11/finland-voices-concern-over-us-and-russian-climate-change-doubters?CMP=Share_iOSApp_Other

Barry Costa - Pierce

1. **How Climate Change is Reshaping Maine's Ocean Economy** (video)
2. **Sustainable Ecological Aquaculture Systems: The Need for a New Social Contract for Aquaculture Development.**
3. **Seven Principles of Ecological Aquaculture: A Guide for the Blue Revolution**
4. **Site selection and carrying capacities for inland and coastal aquaculture** Food and Agriculture Organization Report
5. **Ocean foods ecosystems for planetary survival in the anthropocene** World Nutrition Forum

Robert Pickart

1. http://rpickart.whoi.edu/wp-content/uploads/sites/53/2016/09/ArrigoK_2012.pdf
2. http://rpickart.whoi.edu/wp-content/uploads/sites/53/2016/02/spall_etal_dsr_2104.pdf
3. <http://arcticspring.org/>
4. https://www.dropbox.com/s/1gl0oa5mwn6ldtf/physical_drivers.pdf?dl=0

Jennifer Seavey

1. <https://climate.nasa.gov/evidence/>
2. <https://www.nytimes.com/interactive/2015/11/28/science/what-is-climate-change.html><http://www.ipcc.ch>
3. <http://www.ipcc.ch>
4. <http://nca2014.globalchange.gov/report>

Tuesday

Barbara Rossing

1. Barbara R. Rossing, *The Rapture Exposed: The Message of Hope in the Book of Revelation*, New York: Basic Books, 2007.
2. The Enhancing Life Project. https://www.youtube.com/watch?v=kQu5sA_aBU
3. Rossing, blog on the Tree of Life. <http://enhancinglife.uchicago.edu/blog/the-new-tree-of-life-and-the-biblical-tree-of-life-imagining-our-future>
4. "Apocalypse Now: Revelation So No One Is 'Left Behind'." Revelation, the book of the Bible frequently cited as foretelling the end of the world and describing why true believers should be ready to depart for heaven to avoid Armageddon, is actually a guide to establishing paradise here on Earth, said noted author and New Testament scholar Barbara R. Rossing during an October 18 presentation at Elmhurst College. <https://www.youtube.com/watch?v=5V4lkH6TsR4>. Lecture begins about 10 minutes into the video.

Carol Wayne White

1. Carol Wayne White, *Black Lives and Sacred Humans: The Emergence of an African-American Religious Naturalism*. Fordham University Press, 2016.
2. Carol Wayne White, *Reverberations of a Mystical Naturalism: Revitalizing the Legacy of Anne Conway (1631-1679)* SUNY Press, 2008; Paperback Edition, 2009.
3. Carol Wayne White, Chapter Six: Race and Ethnicity, in *Religion: A Field Guide to the Study of Religion and Ecology: 2nd Edition*. Whitney Bauman, Richard R. Bohannon II, Kevin J. O'Brien, eds. New York: Routledge, 2017.
4. Carol Wayne White, "Stubborn Materiality: African-American Religious Naturalism and Becoming Our Humanity." Chapter 10 in *Entangled Worlds: Science, Religion, and Materiality*. Edited by Catherine Keller and Mary-Jane Rubenstein. Bronx, NY: Fordham University Press, 2017

Emily E. Austin

1. Warming will lead to carbon loss from arctic soils - as much as US emissions

2. Deep soils could be a major source for CO2 emissions: but most of our estimates of greenhouse gas release from soils only consider surface soils
3. Are the Paris agreement goals for C sequestration in soils achievable?
4. Soil Carbon Cowboys – Must see hopeful video
5. Are We Standing on the Solution to Climate Change? Slides – Dr. Tim LaSalle, Co-founder, Regenerative Agriculture Initiative at California State University, Chico

Panu Pihkala

1. About the challenges of various states of denial: “Environmental education after sustainability: hope in the midst of tragedy”, *Global Discourse* 2017
2. A discussion about eco-anxiety and (especially Lutheran) eco-theology: “The Pastoral Challenge of the Environmental Crisis: Environmental Anxiety and Lutheran ‘Eco-Reformation’”, *Dialog* 2016
3. An overview of early ecotheologians, some of whom are discussed in the presentation: “Rediscovery of Early Twentieth-Century Ecotheology”, *Open Theology* 2016
4. An overview of the psychological impacts of climate change: Susan Clayton et al.: “Beyond Storms and Droughts: The psychological impacts of climate change”
5. An influential article about theories of grief/loss and the environment: Rosemary Randall: “Loss and Climate Change: The Cost of Parallel Narratives”, *Eco-psychology* 2009
6. A deeper discussion of mourning: Ashlee Cunsolo Willox: “Climate Change as the Work of Mourning”, *Ethics & Environment* 2012

Wednesday

Matthew Fox

1. Hope and Despair in a Time of Climate Change
2. A Priestly Letter to Catholic Speaker and Congressman Paul Ryan
3. Pope Francis – A Breath of Fresh Air
4. "Pope Francis' Encyclical and the Coming of Age of Creation Spirituality" (Attached PDF)
5. "Earth Day Sermon 2017" (<https://vimeo.com/215719005>)
6. "A (Spiritual) Revolution on the Way?" (http://www.huffingtonpost.com/matthew-fox/a-spiritual-revolution-on_b_12991444.html)
7. *A Way to God: Thomas Merton's Creation Spirituality Journey*
8. *Stations of the Cosmic Christ* with Bishop Marc Andrus and Matthew Fox
9. *Hildegard of Bingen: A Saint for Our Times - Unleashing Her Power in the 21st Century*
10. *Meister Eckhart: A Mystic-Warrior for Our Times*

Ellen Kennedy

Sacred Circle Dance/ Circle Dance

1. Findhorn Foundation <https://www.findhorn.org>
2. Fox Institute for Creation Spirituality www.foxinstitute-cs.org
3. Journey of a Dancer / Bernard Wosien
<http://www.mandyandjudy.co.uk/judy/cds/1465903557.htm>
4. Maria-Gabriele Wosien <http://sacreddance-wosien.net/index.html>
5. Laura Shannon <http://laurashannon.net>
6. June Watts <http://www.junewatts.com/index.php>
7. Dancing at the Dawn of Agriculture Yosef Garfinkel <https://www.amazon.com/Dancing-Dawn-Agriculture-Yosef-Garfinkel/dp/029272845X> <https://utpress.utexas.edu/books/gardan>
8. Dancing in the Streets Barbara Ehrenreich <https://www.amazon.com/Dancing-Streets-History-Collective-Joy/dp/0786162406>

Christopher Volpe

1. <http://christophervolpe.com> Paintings in Oil

James Clement Van Pelt

1. James Clement van Pelt, “**On the brink of the volcano: Convergence, ephemeralization and the telos of technology**”, Chapter 4 of *Different Cultures, One World: Dialogue between Christians and Muslims About Globalizing Technology* (2010) and “Toward a Polanyian Critique of Technology: Attending From the Indwelling of Tools to the Course of Technological Civilization” in *BSTS*

(Bulletin of Science, Technology & Society), May 2011.

2. Egbert Schuurman, *Technology and the Future: A Philosophical Challenge* (Grand Rapids: Paideia Press, 2009)
3. Brian Thomas Swimme and Mary Evelyn Tucker, *Journey of the Universe* (Yale Press, 2011)
4. Jacques Ellul, *The Technological Bluff* (Eerdmans)
5. James R. Chiles, *Inviting Disaster: Lessons from the Edge of Technology* (Harper Business, 2002)
6. Neil Postman, *Technopoly*, (Vintage Books, 1993)
7. John Polkinghorne and Michael Welker, *The End of the World and the Ends of God* (Harrisburg: Trinity Press International, 2000)

Thursday

Jim Rubens

1. Two papers on the political/ideological conflict that makes this problem so wicked) – <http://www.pewinternet.org/2016/10/04/public-views-on-climate-change-and-climate-scientists/>–https://ssir.org/articles/entry/climate_science_as_culture_war
2. One Mission Innovation slide deck on accelerating energy technology innovation (the only politically viable and robust enough solution – <http://mission-innovation.net/resources/presentation-slides/>
3. Jim Rubens, *Over Success* <https://www.amazon.com/OverSuccess-Healing-American-Obsession-Perfection/dp/1929774761>

Peter Kelley

1. The 10th anniversary edition of George Lakoff's Don't Think of an Elephant (revised, 2014), see The ALL NEW Don't Think of an Elephant!: Know Your Values and Frame the Debate https://www.amazon.com/dp/160358594X/ref=cm_sw_r_cp_api_c7jizb1QM8DYB
2. 20th anniversary edition of Sam Daley Harris's Reclaiming Our Democracy: Healing the Break Between People and Government: https://www.amazon.com/dp/1933822848/ref=cm_sw_r_cp_api_Jnkizb3YZF667
3. Randy Olson's "Don't Be Such a Scientist: Talking Substance in an Age of Style" (2009), see https://www.amazon.com/dp/1597265632/ref=cm_sw_r_cp_awdb_09jizbKM5FVJ0

Bill Shoemaker

1. **Response to Anticipated Reward in the Nucleus Accumbens Predicts Behavior in an Independent Test of Honesty**
2. William J. Shoemaker, "The Social Brain Network and Human Moral Behavior," *Zygon: Journal of Religion and Science*, 47 / 4 (December 2012): 806-820. <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9744.2012.01295.x/full>
3. Elizabeth Landau, "How Your Brain Makes Moral Judgements," CNN, March 27, 2014 <http://www.cnn.com/2014/03/26/health/brain-moral-judgments/>

IRAS FUND DONORS, 2016–2017

It is with deep gratitude that we acknowledge the following persons for their gifts to IRAS during the past year. It has made an enormous difference to our sense of the future.

\$2000–up

Gillet Page

\$500–1999

Jane Bengtson

Pauline Candaux

Marjorie Davis & Karl Peters

William and Jean Graustein Fund

Solomon H. Katz Fund

Mark Kuprych

Ted Laurensen

Carol Orme-Johnson

\$200–499

George Gantz

Marion Griswold

Jonathan Marks

Barbara Whitaker-Johns

\$100–199

Elizabeth Bjorkman

Bill & Bonnie Falla

VV & Marilu Raman

Holmes Rolston

Dan Solomon

Lane Tracy

to \$99

Alice Austin

Ruth Bruns

Larry Erickson

Joan Hunter-Brody

Frederick Josties

David Klotz & Jane Penfield

Ed & Leslie Lowry

Joe Ted Miller

David Oringer

Bob & Sally Schaible

Ronald Somerby

Jerome Stone

The following people also donated items to the silent auction at the 2016 conference:

Ruth Bercaw

Marion Griswold

Katharine Houk

Pauline Candaux & Sol Katz

Carol Orme-Johnson

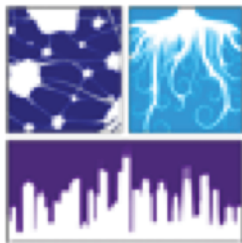
David Klotz

Jane Penfield

SPONSORS

IRAS gratefully acknowledges significant financial support
from the following organizations

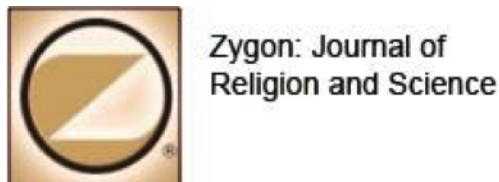
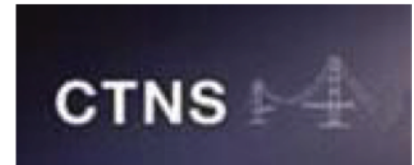
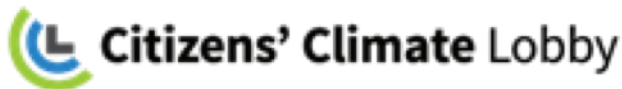
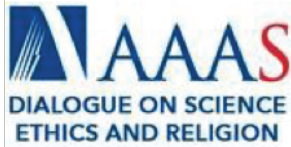
The
Global
Interfaith
Movement



ZYGON CENTER
FOR
RELIGION AND SCIENCE

PARTNERS

IRAS gratefully acknowledges significant financial support as our partners in publicizing the conference.



ACKNOWLEDGMENTS

First, we are grateful for every person who was on Star Island this week, for whatever reason and of whatever age. Your presence among us is appreciated. Much of the work of making a successful event possible is done by those who are unseen—kitchen staff, grounds keepers, babes in arms, carers for children—to name but a few.

Second, we are grateful for every person who was not with us this week, but who contributed over the past year in ways that made this week possible.

Third, we are grateful for all persons who participated in any of the events of the week. To the best of our ability we did this for you. Without you our work would have been sterile. With you we have lift-off.

Fourth, we are grateful for each person who spoke, dialogued, presented and facilitated. Your stimulating leadership moves us.

Fifth, we are grateful for the present generation of Star Island staff, both permanent and temporary. You have made our life easy and contributed to our success in ways we cannot measure.

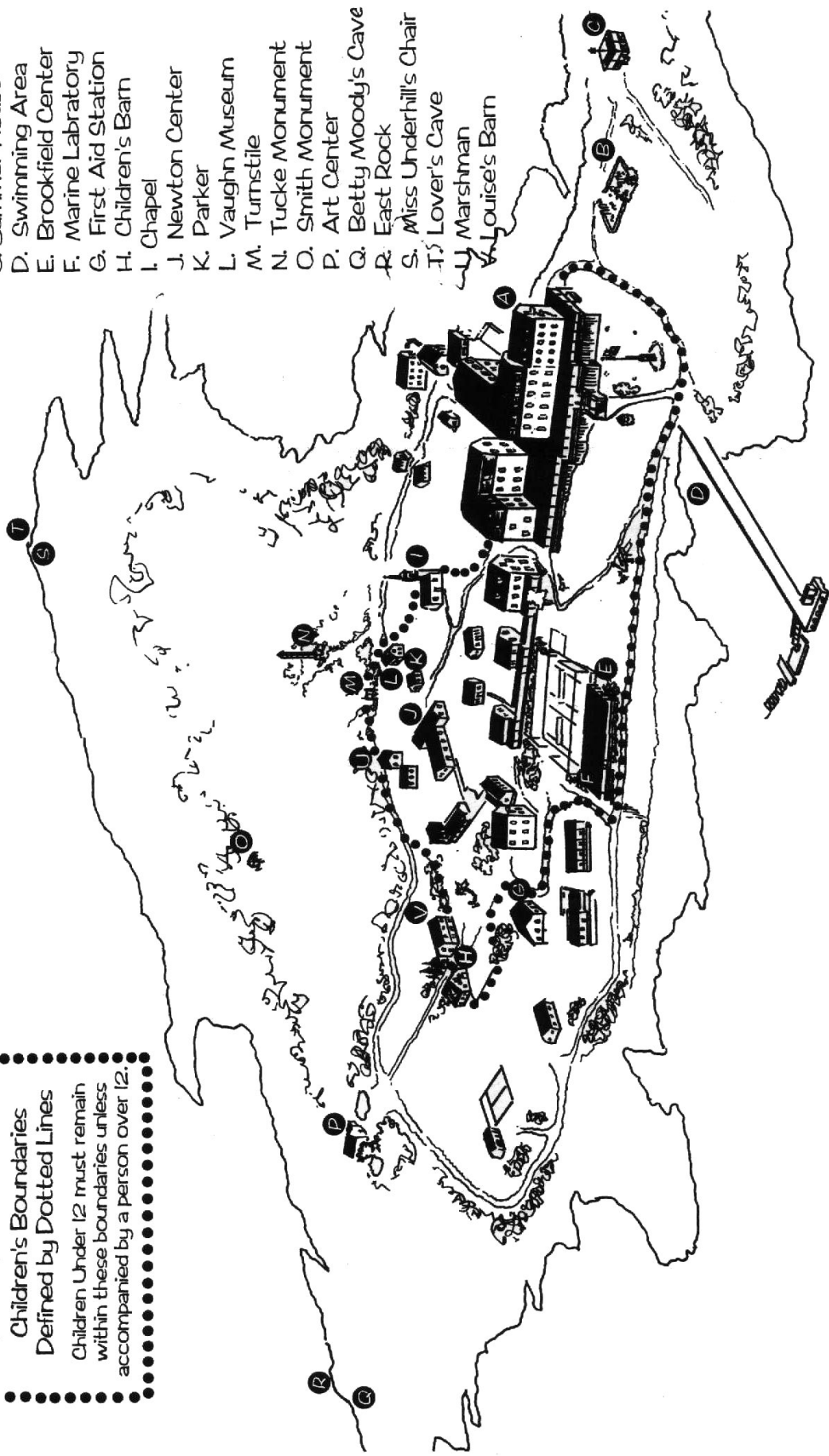
Finally, we are thankful for all of the generations of those who over many decades have kept both IRAS and Star Island alive as a source of love, courage, and faith.

Paul H. Carr, Champion
Emily E. Austin, Cochair
Karl E. Peters, Cochair
Jane M. Bengtson, Coordinator

A Guide to Star Island

●●●●●●●●●●
 Children's Boundaries
 Defined by Dotted Lines
 ●●●●●●●●●●
 Children Under 12 must remain
 within these boundaries unless
 accompanied by a person over 12.

- A. Oceanic Hotel
- B. Caswell Cemetary
- C. Summer House
- D. Swimming Area
- E. Brookfield Center
- F. Marine Labratory
- G. First Aid Station
- H. Children's Barn
- I. Chapel
- J. Newton Center
- K. Parker
- L. Vaughn Museum
- M. Turnstile
- N. Tucke Monument
- O. Smith Monument
- P. Art Center
- Q. Betty Moody's Cave
- R. East Rock
- S. Miss Underhill's Chair
- T. Lover's Cave
- U. Marshman
- V. Louise's Barn



63rd Annual IRAS Conference Saturday, June 24 thru Saturday, July 1, 2017

PERIOD	ACTIVITY	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
7:00-7:30 A.M.	Polar Bear Swim				Polar Bears (Brrr!) – meet on dock			
7:15-7:45 A.M.	12-step meeting			12 step (PP)		12 step (PP)		
7:45-8:30 A.M.	Breakfast (DR)				Breakfast			
8:40-9:15 A.M.	Chapel				Mary Westfall			
9:30-10:45 A.M.	Star Island Dialogues (EI)		Opening Panel	Sol Katz & Barry Costa-Pierce	Barbara Rossing & Carol Wayne White	Matthew Fox & Ellen Kennedy	Peter Kelley & Jim Ruben	Closing Panel
11:00-12:15 P.M.	Small Groups (EI)				Small Groups Discussions			
12:30-1:30 P.M.	Lunch (DR)				Lunch			
1:45-3:00 P.M.	Shapley-Booth (SB) Science Talks (ST)	2:25 P.M. Travel to Star on the Thomas Laignton	ST: Paul Carr Art Barn	ST: Robert Pickart Art Barn	ST: Emily Austin Art Barn	SB: Chris Volpe Art Barn	ST: Bill Shoemaker Art Barn	Memorial (CH) Art Barn
3:15-4:30 P.M.	Art Barn (2:00-4:00)	4:15 P.M., “Fire and Water” Orientation (EI) Required	SB: David Larrabee	ST: Jennifer Seavey	SB: Panu Pikhala	SB: James Van Pelt	IRAS Annual Meeting (EI)	Science Communication
4:45-5:15 P.M.	Late Afternoon		Meditation	PWR Talk: Greenfield (EI)	Yoga	Meditation IRAS Members Reception (PP) Poster Preview	Yoga Poster Session 4:45-6:30 P.M. (N)	Meditation
5:30-6:30 P.M.	Social Hour (N)	Children’s Social Hour meets on the Dragon Playground						
6:30-7:30 P.M.	Dinner (DR)	Dinner	Dinner	Dinner	Lobster Dinner	Dinner	Dinner	Art Show
7:30-8:30 P.M.	Choir (PP)	Choir						
7:30-8:30 P.M.	Archi Pelagos	Bonfire (FP)	Candy Bingo (SB)		Ghosts & Graveyards (FP)		Pel Show 8:30-9:30 P.M. (OL)	Talent Show (EI)
7:30-9:00 P.M.	Discussions (EI)	Welcome: Karl Peters	One Song: JD Stillwater		Dialogue Discussion			
9:15-9:45 P.M.	Candlelight Services (Chapel)	Meet on the front porch to join in a silent procession to the Chapel for the Candlelight service.						
10:00 P.M.-?	Film Screenings (EI)		Before the Flood	Water World	How to Let Go of the World			Farewell Party (N)
Special Tours and Trips			History Tour 1:30 P.M.	Geology Tour 4-5 P.M.	ISHRA Appledore Tour* 1:30-3:30 P.M. Botany Tour 4-5 P.M.	SML-IRAS Appledore Tour* 1:15-3:15 P.M. Behind the Scenes Tour 2-3 P.M. Ice Cream Social 3-3:30 SB Low-Tide Walk 3-4 P.M. Intergenerational Olympics 3:30-5 P.M.	Sustainability Tour 2-3 P.M.	

*For both the IRAS behind-the-scenes tour of the Shoals Marine Lab (Wednesday) and the ISHRA Appledore trip (Tuesday), sign-up sheets for the boat ride to Appledore Island are at the front desk at a charge of \$25 (space is limited).

Room Key: B (Brookfield), CH (Chapel), DR (Dining Room), EI (Elliot), PP (Pink Parlor), FL (front lawn), N (Newton), OL (Oceanic lobby), SB (Snack Bar)