

1 Coral bleaching on Caribbean Coast. Photography: Rasa Weber. Diver: Jota Uparela. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Location: Tierra Bomba (COL), 2023

«Corals are good to queer with.»<sup>1</sup>

The life of corals, their reproductive cycles, and their livelihoods are under acute pressure. Profound human interventions driven by capitalist, territorial, and resource-based interests have provoked significant changes in marine ecosystems. To preserve coral life, conservation management is beginning to make irreversible selective choices. Most of these biopolitical measures taken in the context of coral conservation and management still rely on the binary logic of distinguishing between <healthy> and <diseased> habitats, <native> and <invasive> species, and <pristine> and <anthropogenic> landscapes. The field of marine conservation management applies rigid criteria to the reproductive possibilities of future coral generations

kritische berichte 52, 2024, Nr. 3. https://doi.org/10.11588/kb.2024.3.105416 [CC BY-SA 4.0] through asexual propagation (e.g., coral cloning through coral fragmentation and transplantation) and sexual propagation<sup>2</sup> (e.g., coral broadcasting through assisted coral reproduction technologies).

The governance of coral conservation involves profound scientific and biopolitical decisions about how to intervene in coral life and livelihoods, thus affecting evolutionary history itself in times of crisis. While the selective choices of science in shaping the reproductive capacity and evolutionary trajectory of corals play a central role in the debate on marine biopolitics<sup>3</sup>, such as through cryopreservation of corals, the analysis of ‹super corals›, CRISPR, and the DNA sequencing of the coral genome, this paper focuses specifically on a queer reading of conservation politics in the context of ruinous seascapes. The analysis of three case studies – Varadero Reef, Electric Beach, and Pikinni Atoll – aims to go beyond the notion of exclusive conservation of ‹pristine› habitats and shows how some life forms can survive as *blasted seascapes* (following Anna L. Tsing's term «blasted landscapes»<sup>4</sup>). These cases allow us to recognize chimeric, impure, and disturbed life forms as unexpected sources of hope in catastrophic times.

If «ruins are now our gardens,»<sup>5</sup> as anthropologist Anna L. Tsing reminds us, we need to explore what possibilities arise from these patches that emerge as small habitable zones in often increasingly hostile landscapes. Philosopher Alexis Shotwell, who builds on Tsing's reflections on mushroom cultivation in the shadow of the Fukushima nuclear crisis under the term «disturbance regime,»<sup>6</sup> outlines: «Living in a disturbance regime means that we are all living after events that have changed, and frequently harmed, ecosystems and biospheres».<sup>7</sup> Shotwell further questions, «how to delineate forms of disturbance in relation to what forms of life they sustain or proliferate»<sup>8</sup>. The disturbance regimes under which coral reefs thrive as improbable ecosystems in ruins will be the subject of this proposed queer reading of the ocean.

# The Ocean as a Queer Space

Reef ecologies are now spaces of devastation. Relentless anthropogenic pressure has largely resulted in the degradation or loss of marine habitat. Whereas land-based territorial negotiations fall under biopolitical and colonial power structures, readily evident in how territories are delineated (from Latin <terra>, meaning soil), the spatial organization within marine environments often goes unnoticed – likely due to their reduced visibility to humans. This oversight extends to harbor basins, ex-military zones, tourist resorts, and areas surrounding offshore power stations and oil rigs. These urban marine settings represent potential patches of hope in oceans facing an environmental crisis.<sup>9</sup>

The nascent field of queer ecologies disrupts traditional ecological narratives, advocating for the recognition and establishment of alternate power dynamics and questioning the covertly established norms underpinning marine conservation efforts. Catriona Mortimer-Sandilands, in her pivotal essay «Queer Ecology», argues for a queer ecological standpoint to challenge the dominant heterosexist narratives and practices surrounding sexuality and the natural world, and to envisage evolutionary, ecological, and environmental dynamics anew through the lens of queer theory.<sup>10</sup> Although the queer reading of marine environments has been broached within black feminism<sup>11</sup>, feminist environmental science<sup>12</sup>, and through a queer narrative approach to marine species and behaviors<sup>13</sup>, its application within marine

conservation as *a queer ecology of the ocean* remains largely unexplored. This paper seeks to delve into the specific contact zone of conservation policy and marine urban space, exploring the potential for new ecological alliances. The marine ecosystems explored emerge from environments that are inherently conflicted, altered, and degraded, thus making them prime candidates for a reconceptualization of *aquatory* as queer ecological space.

The ‹queering› of space, as described by geographer Matthew Gandy, speaks of «a heterogeneity of its users but is also connected with multiple structures of power that transcend binary or simplistic classifications [...]»<sup>14</sup>. In his 2012 paper «Queer Ecology: nature, sexuality, and heterotopic alliances», Gandy explores the intersections between queer theory and urban ecology suggesting these intersections could forge a new conceptual framework known as queer ecology.<sup>15</sup> To arrive at a reading of the sea as a queer ecological space, this paper examines the sea's diverse ‹users›, showcasing unlikely species constellations in habitats beyond the ‹healthy› coral reef norm. It also discusses how power structures, driven by capitalist and territorial interests, significantly influence coral reef protection and conservation decisions.

While locating the intersection of urban terrain and nature as «unruly space»<sup>16</sup> that is «anomalous, marginal, and unclassifiable»<sup>17</sup> might be a more obvious choice on land, as seen in Gandy's queer reading of former cemetery Abney Park in London, depicting such interactions in marine environments presents unique challenges. The ocean, although permeated by urban infrastructure, military interests, and trade routes, still serves as an imaginary space of the nature-human divide. This perception is currently undergoing critical reflection by scholars from the Blue Humanities field<sup>18</sup>. The significant human impact on marine ecosystems is leading to the formation of new, according to marine biologists<sup>19</sup> unlikely ecosystems as benthic communities are forming alongside human-made structures. Consequently, coral reefs are undergoing profound changes in the Anthropocene.

The ongoing debate around coral conservation, particularly the effort to protect what is perceived as a *(pristine)* environment, necessitates a critical examination through the lens of queer ecology. This approach focuses on three concepts: *(impurity)*, *(brokenness)*, and *(the wild)*<sup>20</sup>. I suggest that a critical re-reading of these ideas provides a perspective of the reef as a representation of an emerging queer ecology, which offers new promising pathways for convivial living and thinking *otherwise*.

## **Diving into Blasted Seascapes**

This paper is an invitation to explore the blasted seascape with me. We will dive along the traces of human impact, including pollution, effluents, and the remnants of industrial and nuclear activity. Despite the apparent devastation of these environments, I encourage viewing them as potential habitat for future marine life. Echoing Anna Tsing's perspective, «Blasted landscapes are what we have [...] and we need to explore their life-promoting patches».<sup>21</sup>

We will dive together in a swarm. Breathe calmly! This is a blue water descend. This means we will dive directly from the boat, and you may lack orientation for quite some time. All three dive sites that we will visit today are located in oceans currently reaching unprecedented temperature peaks of 30°C over the course of several consecutive months. Yes, you heard right! This means that visibility can be quite poor for the first few meters of our descent due to microalgae blooms and particles that accumulate on thesu face. If you get a sense of panic, I recommend you turn to Jack Halberstam who is diving next to you on your right. If you are feeling disoriented in the murky waters, Alexis Shotwell and Catriona Mortimer-Sandilands are just to your left. And I can even make out Carolyn Merchant back there. Keep calm. Take a deep breath. Let's dive together into blasted seascapes.

## Varadero

At last, we have arrived at the bottom of the sea. This is our first stop. What a reef! Look at the three-dimensional structures of these massive corals. Some of these soft, pale yellow Orbicella are three meters in diameter! There is the endangered Acropora cervicornis over there! Agaricia agaricites, which looks like orange lettuce!



2 Blue Mountain reef at Tierra Bomba with «invasive» Lionfish, a few kilometers from Varadero. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Photography: Rasa Weber. Location: Tierra Bomba (COL), 2023

An existence that thrives against all odds still merits protection: The Varadero Reef leads a paradoxical existence under devastating conditions. This reef «at the end of the world»<sup>22</sup>, as anthropologist Anna L. Tsing might call it, has recently attracted the attention of the scientific community. Despite over 500 years of exposure to poor water quality and significant pollutant deposits, Varadero exhibits a remarkably healthy coral ecosystem, boasting live coral coverage of up to 80%.<sup>23</sup>

In contrast, in the Caribbean reefs near Colombia, the coral population has fallen drastically from 50% to just 10% within four decades.<sup>24</sup> Yet, Varadero emerged as a niche existence: The unlikely ecosystem, barely exceeding 1 m<sup>2</sup>, is located at the mouth of Cartagena Bay, where the Canal de Dique channels vast industrial and urban effluents into the sea. While the canal's construction in 1582 decimated many nearby reefs,<sup>25</sup> Varadero has not only endured but flourished under these less-than-ideal conditions, displaying a diverse fish population<sup>26</sup> and robust coral communities.<sup>27</sup> Since its (discovery) in 2013,<sup>28</sup> scientists have lauded Varadero as a «paradoxical»<sup>29</sup>, «heroic»<sup>30</sup> and «improbable»<sup>31</sup> reef. «Considering the high anthropogenic pressure and suboptimal water conditions at Varadero Reef»<sup>32</sup>, one might be tempted to speculate about its incredible (resilience) that seems to strive

for survival against all odds. However, scientists can still only speculate as to why this small coral reef has turned into a patch of life amidst aquatic ruins. One theory suggests that suspended particles cause the light conditions of the reef to be similar to those in the deep sea, shielding the reef from harmful heatwaves.<sup>33</sup> In other words, controversially, the heavy pollution may have ensured the reef's survival.

The Colombian authorities' latest plans to dredge a new canal through Varadero for commercial purposes have caused concern. This initiative threatens to decimate approximately 75% of the reef's coral, exacerbating the damage to an ecosystem already marred by centuries of human impact. There is a growing call among scientists for a halt to these plans, advocating for the preservation of a marine environment long neglected amidst colonial legacies.<sup>34</sup> Varadero exemplifies the potential for life in the most unexpected places, while challenging the notion that nature will invariably adapt to human impact. This situation invites a fundamental reassessment of what life forms warrant protection. As marine scientists Pizarro et al. suggest, the current state of reef degradation necessitates a shift from traditional restoration goals, acknowledging that returning ecosystems to their (natural) state may no longer be feasible.<sup>35</sup> Varadero's paradoxical case encourages a reexamination of the dichotomy between (healthy) and (diseased), (pristine) and (anthropogenically impacted) ecosystems. The discourse surrounding Varadero underscores the importance of a queer biopolitical critique, equating the value of human and other-than-human life within compromised ecosystems. The reef's survival, despite historical adversities, does not justify further endangering its delicate balance. Varadero's story is a testament to the need for protective measures for all forms of life, regardless of their normative appeal or utility.

## **Electric Beach**

Take a deep breath. Stay calm. Relax. We make a short stop at another popular dive site. Most of the visitors here are snorkelers. Look at the green sea turtle, Chelonia mydas, right in front of us! See that underwater pipe over there? It's densely covered with shells and some coral. Let's dive over to take a closer look.



3 Diver at a sunken military vessel at Barú Island with pioneering marine organisms growing on the ship's hull. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Photography: Rasa Weber. Diver: Javier Olmos. Location: Barú Island (COL), 2023.

The overlooked dynamics of economic, colonial, and state powers significantly influence the management of ecological habitats. Electric Beach on O'ahu, Hawaii, named after its adjacent power plant's practice of discharging thermal water into the ocean, serves as an apt case in point. Established by Hawaiian Electric in 1963, amid the state's economic boom, this facility not only promised economic gains but also seemingly became a focal point for marine biodiversity within an industrial seascape.<sup>36</sup> Local tourism heralds the area as an exceptional snorkeling spot, attributing its allure to the unique ecological constellation fostered by the power plant's thermal emissions. This scenario, where fish congregate around the warm outflows, challenges preconceived notions about industrial impact on marine life.

However, a deeper examination raises concerns about the long-term benefits of thermal pollution for the benthic communities. While popular narratives and some marine studies highlight shifts in fish species compositions due to the plant's operations, the implications for overall biodiversity and coral health remain ambiguous.<sup>37</sup> Research from the 1980s suggested that coral bleaching events, increased by the plant's thermal plume, did not bolster the corals' resilience to rising temperatures.<sup>38</sup> Remarkably, a report by Hawaiian Electric in 1971 downplayed the thermal discharge's detrimental effects, instead emphasizing the increased fish presence near the outflow.<sup>39</sup> This state-commissioned study and its optimistic conclusions have been contested by subsequent research highlighting the broader ecological pressure on Hawaii's coral reefs and benthic communities.<sup>40</sup> The portrayal of Electric Beach as an ecologically (resilient) area likely stems from a concerted promotional effort by both the state and the utility company, which have continuously sought to position Hawaii as a testing ground for novel energy solutions over the past six decades.<sup>41</sup> Studies commissioned by the local Hawaiian authorities never failed to emphasize that the potential risk to marine ecosystems should not preclude the possibility of pursuing the development of a new coastal energy supply system.<sup>42</sup>

A queer ecological analysis of Electric Beach necessitates unpacking the intertwined economic, colonial, and state power structures at play in Hawaii's environmental policies. This approach contextualizes the transformation of Kahe Point into a commercial asset, echoing ecofeminist Carolyn Merchant's critique of the historical redefinition of nature as a resource for human commodity and exploitation, formulated in her book *The Death of Nature. Women, Ecology, and the Scientific Revolution* (1980)<sup>43</sup>. The case of Kahe Point illustrates how economic imperatives can eclipse ecological integrity, challenging us to reconsider the value(s) that guide our interactions with the natural world.<sup>44</sup>

## Pikinni Atoll

Still 100 bars in the oxygen tank? Let's continue our stroll through blasted seascapes. We are right on the edge of a huge hydrogen bomb crater. Don't worry, the radiation levels underwater are now comparatively low. You'd better not touch the coral, though!

The discursive misinterpretation of environments as cpristine and <untouched</pre> landscapes fosters a <resilience</pre> narrative that potentially skews conservation efforts by overlooking global ecological interconnections. This misconception was starkly highlighted in 1946 when, shortly after the atomic bombings of Hiroshima and Nagasaki, the US commenced nuclear testing on Bikini Atoll, known in Marshallese as Pikinni.



4 Diver looking through window of a sunken military vessel at Barú Island with pioneering marine organisms growing on the ship's hull. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Photography: Rasa Weber. Diver: Javier Olmos. Location: Barú Island (COL), 2023

The tests not only devastated the terrestrial and marine life but also displaced the entire local population of 167 inhabitants, rendering their homeland uninhabitable due to radioactive fallout. Between 1946 and 1958, twenty-three nuclear detonations by the US military not only led to the forcible displacement of Pikinni's inhabitants but also marked the onset of «the militarization of the sea».<sup>45</sup> This term, as noted by ecologist and Blue Humanities scholar Elizabeth M. DeLoughrey with reference to Philip Steinberg's *Social Construction of the Ocean* (2001), reflects the strategic use of oceanic spaces for military dominance.<sup>46</sup> The considerations on the long «overlooked and underrepresented»<sup>47</sup> ocean militarism, crucial to the emergence of the Blue or Oceanic Humanities, provide a critical backdrop for a queer reading of Pikinni Atoll as a devastated marine environment. The Operation Castle series of tests notably altered the atoll's landscape and significantly affected the surrounding marine ecosystem, creating two massive underwater craters. The largest of these, resulting from the «Bravo» and «Romeo» bomb detonations, carved a 2 km wide and 73 m deep cavity into the coral reef, visible even from space.<sup>48</sup>

Pikinni Atoll's legacy as a symbol of nuclear impact is complex, as it has become *the paradoxical icon* of a {blasted seascape}. The immediate and long-term ecological consequences included drastic temperature surges, sediment displacement, and extensive radioactive contamination.<sup>49</sup> «Coral fragments were reported to have landed on the decks of the target fleet deployed within the lagoon»,<sup>50</sup> describe biologists Richards et al. in a paper on the long-term effects of nuclear testing on coral communities. Despite the absence of immediate data post-detonation, the consensus among scientists is that the tests significantly disrupted the marine habitat, with coral recovery being slow and lacking in diversity for decades.<sup>51</sup>

In 2017, *Stanford University Magazine* published an article on the current state of the coral communities at Pikinni Atoll, revealing a stunning contrast: Amidst a reef still marked by the aftermath of nuclear testing, researchers uncovered not just sporadic coral life but vibrant, expansive communities that are thriving – «corals larger

than cars scattered about the edges of a hydrogen bomb crater.»<sup>52</sup> Aside from the fact that Americans seem to compare everything to the size of a car, this revelation prompts a critical reevaluation: Is the atoll living proof of life's indomitable resilience, conquering death regardless of the catastrophes it faces? Or are these corals a mutated species that can only survive as monsters in the face of catastrophe? And does this case not silence all further ecological efforts to preserve coral reefs? The story of Pikinni's reefs could lead to a simplistic Neo-Darwinian conclusion of «survival of the fittest». The narration of unyielding life, as captured in the PBS documentary *Big Pacific* (2017), where coral biologists marveled at the atoll's thriving reef life,<sup>53</sup> juxtaposes sharply with the portrayal of Bikini as a pristine haven by the tourism industry<sup>54</sup> – a narrative that glosses over the atoll's violent and violated history.<sup>55</sup>

UNESCO's designation of Pikinni Atoll as a World Heritage Site in 2010 underscores its complex legacy:

«Bikini Atoll has conserved direct tangible evidence that is highly significant in conveying the power of the nuclear tests, i.e. the sunken ships sent to the bottom of the lagoon by the tests in 1946 and the gigantic Bravo crater. Equivalent to 7,000 times the force of the Hiroshima bomb, the tests had major consequences on the geology and natural environment of Bikini Atoll and on the health of those who were exposed to radiation. Through its history, the atoll symbolizes the dawn of the nuclear age, despite its paradoxical image of peace and of earthly paradise.»<sup>56</sup>

The pervasive misinterpretation of Pikinni Atoll as an ‹untouched wilderness› is precisely what philosopher Jack Halberstam challenges in his work Wild Things: The Disorder of Desire<sup>57</sup>. Halberstam critiques the traditional portrayal of (the wild) as an exoticized (other) or a relic of a romanticized past. Instead, he proposes (the wild) as a dynamic and subversive concept, emerging from the destructive discourses of civilization, standing in defiance of modernity's quest for order.<sup>58</sup> Geographer Jeffrey Sasha Davis concludes that the atoll is «one of the most ‹touched› places on the face of the planet,»<sup>59</sup> highlighting the political narrative that has strategically disconnected Pikinni from its history of contamination.<sup>60</sup> This narrative has rebranded the atoll, aligning it with images of tropical paradises that pervade Western civilization for centuries.<sup>61</sup> Thus, Pikinni exemplifies how modernity projects the illusion of (pure nature, onto landscapes, disregarding the ongoing global ecological crisis driven by human activity. Contrasting Pikinni with other Marshall Islands dispels the myth of its potential return to a pristine condition. Despite low CO<sub>2</sub> emissions from the local population, the islands are facing severe climate change impacts: sea level rise, droughts, tsunamis, heatwaves, and pollution, with some islands already in the process of sinking.62

By reimagining Pikinni Atoll beyond the myth of ‹untouched wilderness› and acknowledging it as a blasted seascape, it emerges, in Halberstam's terms, as a wild space that counteracts normative notions of ‹brokenness› and ‹repair›. Through a queer ecological perspective, Pikinni becomes a defiant space that challenges and redefines the very essence of nature it purports to embody. Pikinni is feral,<sup>63</sup> an untamed and subversive space that has survived – violated, contaminated, and blasted – as a ruin of nuclear hegemony.

## **Contaminated hope**

Where, amidst the ruins of aquatic ecosystems, do we find hope? The image of Pikinni Atoll as an (untouched paradise) is disintegrating before our eyes. Similarly,



5 Interior of a sunken military vessel at Barú Island with pioneering marine organisms growing on the ship's hull. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Photography: Rasa Weber. Location: Barú Island (COL), 2023

Electric Beach as a ‹resilient› ecosystem is revealed as mere clever marketing, while the precarious existence of Varadero Reef faces renewed threats of erasure. The romanticized myth underlying the conceptualization of these blasted ecosystems as lost ‹Gardens of Eden› is based on two dangerously misleading assumptions: Firstly, it imagines a pre-polluted state where all was well, and the seascape was still a pristine paradise. Secondly, it suggests that landscapes, if left seemingly undisturbed by humans, will naturally revert to a state of untouched beauty and purity.

Alexis Shotwell critiques the philosophical pursuit of purity, highlighting the fallacy in Anthropocene discourse (and by extension, in conservation management) that believes we can reclaim a pre-polluted state, «before the fall of innocence, when the world at large [was] truly beautiful».<sup>64</sup> Contrary to this view, Shotwell posits the Anthropocene as a period defined by inextricable interdependencies, a continuous negotiation between «complicity and compromise».<sup>65</sup> The coral reefs of Varadero, Electric Beach, and Pikinni Atoll have been ‹blasted› in many ways: by nuclear detonations, industrial encroachments, tourism, commercial shipping, and environmental stressors such as microplastics, thermal anomalies, acidification, and sea-level rise. Human interaction left an indelible mark on these ecosystems long before the detonation of the first hydrogen bomb. Despite appearing untouched and demonstrating remarkable adaptability, these reefs bear the traces of human activity, their future inextricably linked to our human presence. These unlikely ecosystems have managed to establish their existence in blasted seascapes that, as Alexis Shotwell reminds us, «still can be spaces for hope»<sup>66</sup>. They illustrate neither the downfall of paradise nor the irreversible destructive power of the human species alone: In their continued resistance to being wiped off the map, despite all the destructive forces arrayed against them, they could be read as islands of hope in a largely ruinous ocean. This hope, however, is contaminated.

## **Queer Reefs**

We are now close to the shore. Breathe. These are the last few meters of our dive. Take one last look around you. The brain coral over there has absorbed radioactive isotopes in its skeleton. The belly of that parrotfish is filled with microplastics. That lionfish over there probably came here in the ballast water of a cargo ship from the Indo-Pacific. And this Caribbean hermit crab has moved into a beer can!



6 Command bridge of a sunken military vessel at Barú Island with pioneering marine organisms growing on the ship's hull. From the Project: «Symbiotic Coral Nurseries» in collaboration with The Polynesian Institute of Biomimicry IPB, Andry Carrasquilla, Paraiso Dive Center. Photography: Rasa Weber. Location: Barú Island (COL), 2023

The reefs of Varadero, Electric Beach, and Pikinni Atoll epitomize the ruinous impacts of modernization, highlighting the emergence of unruly ecosystems that challenge traditional parameters of conservation policy. The existence of these ecosystems is emblematic of the impact that humanity has had in the past and will continue to have on this planet. If these seascapes are blasted, they should be embraced in their ‹brokenness›. Jack Halberstam's notion of embracing ‹brokenness› as a form of resistance against attempts to ‹repair› nature urges a reconsideration of conservation strategies.<sup>67</sup> These (marine) landscapes should thus provoke a reevaluation of traditional conservation methods, which often still rely on a pre-human baseline.<sup>68</sup> A traditional approach persistently employs binary distinctions – alive vs. dead, healthy vs. sick, native vs. invasive – in shaping conservation strategies. As ecologists Michelle Marvier, Peter Kareiva, and Robert Lalasz contend, conservation cannot aim to restore ecosystems to a prehuman state but should envision a future where nature coexists amid human-modified landscapes.<sup>69</sup>

The rigs-to-reefs practice<sup>70</sup> might come closer to a queer ecological approach to marine conservation by repurposing decommissioned offshore oil rigs as artificial reefs. The capitalist interplay between oil drilling companies and the US government should of course be viewed with caution, as repurposing an oil rig into an artificial reef is far more cost effective for petrol companies than legally mandated platform decommissioning. However, it offers an interesting perspective on the preservation of marine habitats that are beginning to form within the devastated ecosystems that capitalism has irreversibly produced. Queer reefs incorporate the ongoing effects of toxicity, human and other-than-human intervention, of so-called invasive species, industries,

climate shifts, the shared struggles of marine communities and marine dwellers themselves. They suggest confronting possible future ecologies as feral, incurable, and symbiotic life forms. They encourage a critical reassessment of conservation goals, highlighting the need for a dialogue that acknowledges the intertwined fates of all species, including humans, in their shared struggle for survival. Queer reefs fore-shadow the possibility of «convivial conservation»<sup>71</sup> in a ruinous ocean. Rather than staring in horror at the looming demise of nature, the prospect of redefining diverse natures offers a ray of hope, urging us to unleash «collective responses to collective harm»<sup>72</sup> and to rethink and rebuild marine futures.<sup>73</sup> As environmental geographer Jamie Lorimer insightfully states, «Futures will not be like the past and will be shaped by human actions;» he poignantly reminds us that «multiple natures are possible.»<sup>74</sup>

Envisioning islands of hope amid devastation challenges the intertwined political and economic dynamics of ecology and capital, contests the dominance of human needs over those of other-than-human beings, and questions the rigid dichotomy between nature and culture, humans and the environment. Queer reefs thrive. Yet their survival hinges on them being recognized as vulnerable contact zones of interaction between human and other-than-human life that are worth protecting. They have begun to create patches of contaminated hope in the toxic remnants of the aquatic ruins we are currently diving through.

Let's take one last deep breath. We are back on the surface.

#### Notes

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**3** Irus Braverman: Coral Whisperers. Scientists on the Brink. University of California Press, Oakland California, 2016. And: Stefan Helmreich, 2016.

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**5** Tsing 2014, p. 87.

**6** Alexis Shotwell: Against Purity. Living Ethically in Compromised Times. University of Minnesota Press. Minneapolis, 2016, p. 9.

7 Shotwell 2016, p. 9.

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17 Gandy 2012, p. 734.

**18** Hester Blum: The Prospect of Oceanic Studies. In: PMLA, 2010, Vol. 125, No. 3, p. 670–677. https:// www.jstor.org/stable/25704464. Philip E. Steinberg. Of other seas: metaphors and materialities in maritime regions. In: Atlantic Studies, 2013, 10(2), p. 156–169. https://doi.org/10.1080/14788810.2013.7

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