Deep and Scenario Reference Guide

INTRODUCTION

Welcome… to the Deep! Down here in the depths, you'll find a dazzling variety of strange new traits and wild environmental conditions. Sometimes it's not always obvious how those traits and scenarios are supposed to interact with each other. In most cases, the card text, rulebook, and the basic reference guide printed with the game will clear things up. But the Deep is vast and unknown, and there may still be some situations that require further explanation or clarification.

That's what this reference guide is for. It describes each Deep and Scenario card individually, including promo cards. It handles obscure interactions that might come up, and provides reminders for rules details you might have overlooked. At the end, the new rules reference section includes rules for new mechanics from promo cards, such as Deep event cards.

The Deep and Scenario Reference guide is a pretty long document, but it's not necessary to read the whole thing in order to have fun with *Oceans*. Just look up a specific card when you need to. If your playgroup would rather skip this reference guide entirely and just make up a house rule, that's fine too. (I won't tell anybody.) On the other hand (or fin), if your group would prefer an objective reference, you're in the right place.

If you still have any questions that aren't covered, you can ask on the *Oceans* forums at BoardGameGeek or on the *Oceans* Discord server. The latest versions of this reference guide can be found on North Star Games' *Oceans* page and BoardGameGeek's *Oceans* files page.

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DEEP CARD REFERENCE

This section provides a card-by-card description of each Deep card, including its full card text, migrate and resolution numbers, rules explanations, and some of its potential interactions. Some common card icons and effects are already described in the basic reference guide, so they won't be covered again. Descriptions of cards which aren't in the base game also mention which *promo set* they can be found in.

Abyss Dweller
Migrate 1 — Defensive — May not forage — Resolution 1
May not **attack** or be **attacked** by species with a Surface trait. **Evolves** other Deep traits for free.

- **Evolving** other Deep traits for free means you don't have to pay from your score pile in order to play Deep traits onto *Abyss Dweller*. Playing those Deep traits still requires an action.
- If a species ignores a trait, it treats that trait as if it doesn't exist. If *Abyss Dweller* has other traits that allow it to ignore all of a potential target's Surface traits, *Abyss Dweller* can **attack** that species.
- If *Abyss Dweller* has an effect that allows it to ignore "may not be **attacked**" effects, that doesn't allow it to **attack** species with Surface traits. "May not **attack**" effects on the attacker are different from "may not be **attacked**" effects on the target.
- A "may not **attack**" effect isn't the same as having a [May not attack] icon. If *Abyss Dweller* also has [Bubble Net](), it doesn't ignore its own "may not **attack**" effect, and still can't **attack** a species with a Surface trait.

Acute Smell
Migrate 2 — Gain 1 — Resolution 2
Gains 1 for each *Shark Cleaner* that triggers.

- *Acute Smell* triggers as soon as the *Shark Cleaner* traits are triggered, not when they resolve. For game purposes, *Acute Smell* is triggered simultaneously with the *Shark Cleaners*.
- *Acute Smell* is triggered by *Shark Cleaner* traits on the same species.
- *Acute Smell* is triggered by any trait named *Shark Cleaner*. This includes the Surface version of *Shark Cleaner* as well as the [Deep version]().
- The trigger of *Acute Smell* refers specifically to traits named *Shark Cleaner*, not simply any species with *Shark Cleaner*. If a species with *Shark Cleaner* has another trait that triggers, but *Shark Cleaner* itself doesn't, *Acute Smell* doesn't trigger.
- *Acute Smell* triggers a separate time for each *Shark Cleaner* trait that triggers, and each of those counts as a separate **gain**. Effects that modify a species' **gains** affect each one individually. For example, if the [Abundance]() scenario is active, a species with *Acute Smell* **gains 2** for each *Shark Cleaner* that triggers.
- If a *Shark Cleaner* triggers for some other reason besides its printed text, *Acute Smell* still triggers. For example, if the [Population Explosion]() scenario event is triggered, *Acute Smell* triggers, each *Shark Cleaner* triggers, and those triggers in turn trigger *Acute Smell* again.
- If a *Shark Cleaner* would trigger but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** and its trigger doesn't go off. *Acute Smell* doesn't trigger.
- It is possible for *Acute Smell*'s triggers to resolve before the *Shark Cleaners* that triggered it in the first place, if the *Acute Smell* is owned by a player who comes earlier in the turn order than the *Shark Cleaners*.

Advanced Eyes
Migrate 1 — Resolution 3
Ignores 1 defensive trait when **attacking** a species with a Deep trait.

- Conditions for "ignore" effects are checked simultaneously before anything is ignored, and an "ignore" effect won't undo its own condition retroactively. If a target has only 1 Deep trait, and that Deep trait is defensive, the species with *Advanced Eyes* can ignore that trait. Afterwards,

as far as the species with *Advanced Eyes* is concerned, the target doesn't have any Deep traits, but its "ignore" effect still applies.

- If the target has multiple copies of the same defensive trait, *Advanced Eyes* only ignores 1 of those copies.
- The defensive trait that *Advanced Eyes* ignores does not have to be a Deep trait.
- If the ignored defensive trait triggers from the **attack**, the attacker isn't affected by it.

Ambush
Migrate 3 — Resolution 4
After each species **forages**, take 2 population from it.

- The trigger isn't optional. The species with *Ambush* takes 2 population after another species **forages**, even if that means the species with *Ambush* would overpopulate or take from one of your own species.
- Species can't take from themselves. If the species with *Ambush* **forages**, it won't take population from itself.

Apex Predator
Migrate 1 — Defensive — May not forage — Attack 4 — Defense 3 — Resolution 5

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Apex Predator* has an additional point of [Attack] and [Defense].
- The Deep version of *Apex Predator* does not count as a Surface trait.

Atavism
Migrate 1 — Resolution 6
May have 2 extra traits. Before your feeding phase, may swap traits with Surface cards in your hand.

- You can only swap Surface traits from your hand onto the species with *Atavism*, but you can swap Deep traits back to your hand from that species.
- Deep versions of Surface traits aren't Surface traits, and can't be swapped from your hand onto the species with *Atavism*.
- You can make multiple swaps when the *Atavism* trigger resolves. Treat the swaps as if they occurred simultaneously, even if you make your choices and physically swap the cards one at a time.
- You can swap out *Atavism* itself, and you can swap it back to your hand along with other traits on the same trigger.
- Swapping a trait back to your hand counts as removing it. You can't use *Atavism* to get rid of traits that may not be removed, such as *[Cthulhu Leech](#)* or *[Vestigial Limb](#)*.
- Swapping a trait onto a species doesn't count as playing or **evolving** it. For example, if you swap a defensive Surface trait onto a species while the *[Protective Growth](#)* scenario is active, your species won't **gain 2**.
- Copies of traits created by traits like *[Intelligence](#)* can't be swapped back to your hand. Only traits on actual cards can be swapped.
- A trait that's already been swapped before this feeding phase, from an effect like *[Gene Transfer](#)*, can be swapped again with *Atavism*. Since both *Atavism* and *Gene Transfer* trigger before your feeding phase, you can arrange those triggers how you like.

Barbels
Migrate 1 — Gain 1 — Resolution 7
Gains 1 for each *Bottom Feeder* that triggers.

- *Barbels* triggers as soon as the *Bottom Feeder* traits are triggered, not when they resolve. For game purposes, *Barbels* is triggered simultaneously with the *Bottom Feeders*.
- *Barbels* is triggered by *Bottom Feeder* traits on the same species.
- *Barbels* is triggered by any trait named *Bottom Feeder*. This includes the Surface version of *Bottom Feeder* as well as the [Deep version](#).
- The trigger of *Barbels* refers specifically to traits named *Bottom Feeder*, not simply any species with *Bottom Feeder*. If a species with *Bottom Feeder* has another trait that triggers, but *Bottom Feeder* itself doesn't, *Barbels* doesn't trigger.
- *Barbels* triggers a separate time for each *Bottom Feeder* trait that triggers, and each of those counts as a separate **gain**. Effects that modify a species' **gains** affect each one individually. For example, if the [Abundance](#) scenario is active, a species with *Barbels* **gains 2** for each *Bottom Feeder* that triggers.
- If a *Bottom Feeder* triggers for some other reason besides its printed text, *Barbels* still triggers. For example, if the [Population Explosion](#) scenario event is triggered, *Barbels* triggers, each *Bottom Feeder* triggers, and those triggers in turn trigger *Barbels* again.
- If a *Bottom Feeder* would trigger but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** and its trigger doesn't go off. *Barbels* doesn't trigger.
- It is possible for *Barbels*' triggers to resolve before the *Bottom Feeders* that triggered it in the first place, if the *Barbels* is owned by a player who comes earlier in the turn order than the *Bottom Feeders*.

Behemoth
Migrate 2 — May not forage — Attack 3 — Resolution 8
Ignores "may not be **attacked**" effects if this species has a greater [Attack] than the target.

- Multiple "ignore" effects that affect the same event are checked simultaneously, before anything is ignored. If the potential target has a defensive trait with [Attack], you still have to take that defensive trait's [Attack] into account when seeing if the *Behemoth* has a greater [Attack] than the target, even if *Behemoth* has other traits that would allow it to ignore that defensive trait.
- Ignoring "may not be **attacked**" effects won't ignore other effects of defensive traits, such as [Defense] or effects triggered by the **attack**.
- The [May not attack] icon doesn't change a species' [Attack]. A species that can't **attack** still has at least [Attack 1], and it's possible for a species that can't **attack** to still have an increased [Attack] from traits like *Speed* or [Megamouth](#). These are taken into account when checking *Behemoth*'s "ignore" effect.
- If the species with *Behemoth* also has [Bubble Net](#), it compares its own [Forage] to the target's [Attack] to check the condition for the "ignore" effect. If the *Behemoth* is **attacking** a species with *Bubble Net*, it compares its own [Attack] to the target's [Forage]. If both the *Behemoth* and its target have *Bubble Net*, it compares its own [Forage] to the target's [Forage].

Bioluminescence
Migrate 2 — Gain 1 — Resolution 9
Gains 1 after a Deep trait is played on a species.

- Traits can't be triggered by themselves being played, or affect anything triggered by themselves being played. *Bioluminescence* doesn't trigger itself when it's first played on a species, though it will trigger other copies of *Bioluminescence* already in play.
- *Bioluminescence* doesn't trigger when a Deep event card is played, only when Deep traits are played.
- Swapping a Deep trait onto a species with a trait like *Rapid Mutation* doesn't count as playing a Deep trait. *Bioluminescence* won't trigger when this happens.
- A species getting a copy of a Deep trait with a trait like *Mimicry* or *Hybridization* doesn't count as playing a Deep trait. *Bioluminescence* won't trigger when this happens.

Bioluminescent Lure
Migrate 2 — Event — Resolution 96 — *Kickstarter Promo*
Play as an extra action when **attacked**. After the **attack** is resolved, if the attacker is a valid target, the attacked species **attacks** back once.

- Errata: Some printings of *Bioluminescent Lure* have a resolution number of 1 instead of 96.
- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.
- Unlike other events, *Bioluminescent Lure* isn't played during your playing cards phase. It's played when a species you own is **attacked**. There is no set time during the **attack** when you have to play the card, but try to play it before all the triggers from that **attack** have resolved. Once the other players have moved on to other things, like dealing with overpopulation, it's too late.
- In order to play *Bioluminescent Lure*, the species that's **attacking** must be a valid target for the targeted species. The targeted species must be able to **attack**, must be able to ignore any "may not be **attacked**" effects, must be able to take at least 1 population, and so on. If the attacked species can't **attack** its attacker, then you can't play *Bioluminescent Lure*.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can still feed later in that turn. If the targeted species overpopulated earlier in the turn, even from the **attack** against it, it can still use *Bioluminescent Lure* to **attack** back.
- A player can't take back their **attack** when *Bioluminescent Lure* is played. They have to carry it out to the bitter end.
- If you **attack** your own species, you can play *Bioluminescent Lure* during that **attack**.
- The **attack** from *Bioluminescent Lure* takes place after all the triggers from the original **attack** have resolved, and before overpopulation is checked. (See step 3 in the "Feeding: Order of Operations" section of the basic reference guide.)
- A species with *Tentacled* or other traits that allow it to **attack** additional times can still only **attack** once from the effect of *Bioluminescent Lure*. If you use multiple copies of *Bioluminescent Lure* during the same **attack**, the attacked species can **attack** once for each copy of *Bioluminescent Lure* that was played.
- If someone plays a *Bioluminescent Lure* during an **attack** that also triggers *Burrower*, the order that the additional **attacks** occur is determined like with triggers: in turn order, then each player chooses the order of their triggers.
- *Bioluminescent Lure* can be played during the "retaliation **attack**" from a species with *Burrower*. If you're playing with a personal Deep deck that has multiple copies of

Bioluminescent Lure, you can play *Bioluminescent Lure* during the "retaliation **attack**" of another *Bioluminescent Lure*.

Biome Toxicity
Migrate 4 — Left + right arrows — Resolution 10 — *Bundle #1*
After this species or an adjacent species is **attacked**, every species except this species and its adjacent species loses 1 population to the Reef.

- Even though it's triggered by **attacks**, *Biome Toxicity* doesn't have a black text box, and it isn't a defensive trait. It can't be ignored by effects that ignore defensive traits.
- The species with *Biome Toxicity* and the species adjacent to it can still **attack** one another. They don't lose any population to the Reef, but every other species does.
- The losses caused by *Biome Toxicity* are considered to be "due to an **attack**" for traits that care about that.

Biotic Cycle Reversal
Migrate 1 — Gain 3 — Resolution 11
Gains 3 after an **attack** reduces this species to 0 population.

- The effect triggers whenever the species with *Biotic Cycle Reversal* is reduced to 0 population due to an **attack**. *Biotic Cycle Reversal* only triggers from the effect that reduces its population to 0. *Biotic Cycle Reversal* doesn't trigger if its population is reduced to 0 from some other effect, such as **leeching**, losses caused by scenarios, and so on.
- Effects that count as losing population due to an **attack** include:
    - Being **attacked**.
    - Having population taken by *Hydra* during an **attack**.
    - Losing population due to an effect that triggers specifically from **attacking** or being **attacked**. An attacker can lose population due to its own **attack**.
    - Losing population due to an effect that triggers from another effect that's triggered due to the **attack**. In other words, any chain of triggers that started specifically from **attacking** or being **attacked**.
- Triggers resolve in turn order. If *Biotic Cycle Reversal* triggers while there are other triggers waiting to resolve, it may resolve before those earlier triggers if its controller comes earlier in the turn order.

Blood Bath
Migrate 3 — Event — Resolution 97 — *Bundle #2*
Instead of your usual feeding turn, each of your species with [Attack 3] or greater may **attack** this turn.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The rules section has further details about how events work.
- Once you've replaced your normal feeding turn with an effect like *Blood Bath*, you can't use another event like *Overgrazing* to replace it again. You can only play one "instead of your normal feeding turn" event per turn.
- In between each species' feeding turn, triggers resolve, overpopulation is checked, and scenarios are activated or deactivated.

- Species with *Tentacled* or other traits that allow them to feed additional times may **attack** additional times during *Blood Bath*. They can't use the additional feedings to **forage**. Species that **attack** multiple times during *Blood Bath* have to take their additional feedings consecutively.
- A species that makes a "retaliation **attack**" with an effect like [Bioluminescent Lure](#) or [Burrower](#) during a *Blood Bath* can still take a regular feeding turn. Likewise, a species that's already taken its regular feeding turn can still make a "retaliation **attack**" later in the turn.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can still feed later in that turn. If one of your species overpopulates because one of your other species **attacked** during a *Blood Bath*, that species can still **attack** later in the turn.
- Species that can ignore their own [May not attack] icon, like species with [Bubble Net](#), can **attack** during a *Blood Bath*. A species with *Bubble Net* must have at least [Forage 3] to **attack** during a *Blood Bath*.
- Eligibility to **attack** is determined as each feeding turn begins. If a species' [Attack] increases to 3 or more during a feeding phase (for example, if it has [Swarming](#) and it **gained** population from another species' **attack**), then it can **attack**. If a species' [Attack] drops below 3 during a feeding phase, then it can't **attack** again.

Blubber
Migrate 1 — Defensive — Defense 1 — Resolution 12
May store 9 extra population on the species board.

- Errata: Some printings of *Blubber* accidentally have a white text box instead of a black one. It should be a defensive trait with a black text box.

Bottom Feeder
Migrate 1 — Gain 2 — Left + right arrows — Resolution 13
Gains 2 after an adjacent species loses population due to an **attack**.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Bottom Feeder* is triggered by both adjacent species, not just one. It also triggers when an adjacent species loses population for any reason due to an **attack**, not just if it was **attacked** directly.
- The Deep version of *Bottom Feeder* does not count as a Surface trait, but it does count as a trait named *Bottom Feeder*. When it triggers, it will trigger traits like [Barbels](#).
- Effects that count as losing population due to an **attack** include:
  - Being **attacked**.
  - Having population taken by [Hydra](#) during an **attack**.
  - Losing population due to an effect that triggers specifically from **attacking** or being **attacked**. An attacker can lose population due to its own **attack**.
  - Losing population due to an effect that triggers from another effect that's triggered due to the **attack**. In other words, any chain of triggers that started specifically from **attacking** or being **attacked**.
- Losses caused by overpopulation, scenarios, or insufficient species board space don't count as losing population due to an **attack**, even if an **attack** caused that species to have too much population or that scenario to be activated.

- Triggers resolve in turn order. If *Bottom Feeder* triggers while there are other triggers waiting to resolve, it may resolve before those earlier triggers if its controller comes earlier in the turn order.

Bright Coloration
Migrate 1 — Gain 1 — Resolution 14
Gains 1 after a new species is created.

- Traits can't be triggered by themselves being played, or affect anything triggered by themselves being played. *Bright Coloration* won't trigger itself if it's used to create a new species, though it will trigger other copies of *Bright Coloration* already in play.

Bubble Net
Migrate 1 — Resolution 15
Ignores its own [May not attack]. Uses [Forage] to **attack**. Ignores *Schooling* when **attacking**.

- This ignores all [May not attack] icons on its traits, not just one.
- This ignores the Deep version of *Schooling* as well as the Surface versions.
- *Bubble Net* doesn't prevent a species from **foraging**.
- The species with *Bubble Net* uses its [Forage] instead of its [Attack] for any effect that cares about [Attack], such as **attacking**, or checking the conditions of traits like *Behemoth* or *Goethite Exoskeleton*. It can't choose between its [Attack] and its [Forage] in situations that would use its [Attack]; it always uses its [Forage] instead. As far as the species with *Bubble Net* is concerned, its [Attack] doesn't exist.
- If the species with *Bubble Net* also has [May not forage], that won't prevent it from using its [Forage] to **attack**. The [May not forage] icon doesn't change a species' [Forage]. A species that can't **forage** still has at least [Forage 1], and it's possible for a species that can't **forage** to have [Forage] from traits like *Speed* or *Megamouth*. These are taken into account when determining what *Bubble Net*'s [Forage] is.
- A "may not **attack**" effect isn't the same as having a [May not attack] icon. If a species with *Bubble Net* is affected by a "may not **attack**" effect (for example, from being **attacked** by *Paralyzing Venom*, from an active *Evolutionary Arms Race* scenario, or from its own *Gargantuan*), it can't ignore that effect.

Burrower
Migrate 1 — Left + right arrows — Resolution 16
After an **attack** on an adjacent species is resolved, if the attacker is a valid target, this species may **attack** it once.

- In order for the effect of *Burrower* to trigger, the species that's **attacking** must be a valid target for the species with *Burrower*. The *Burrower* species must be able to **attack**, must be able to ignore any "may not be **attacked**" effects, must be able to take at least 1 population, and so on. If the *Burrower* species can't **attack** the original attacker, then its effect won't trigger.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can still feed later in that turn. If the species with *Burrower* overpopulated earlier in the turn, even from the **attack** that triggered it, it can still use *Burrower* to **attack** back.
- The "retaliation **attack**" is optional.

- Species can't **attack** themselves, so *Burrower* doesn't trigger itself if the *Burrower* species **attacks** an adjacent species.
- A species with *Tentacled* or other traits that allow it to **attack** additional times can still only **attack** once from the effect of *Burrower*. If a species has multiple copies of *Burrower*, it can **attack** once for each copy that was triggered.
- *Burrower* still triggers if you're the player who **attacked** the adjacent species. *Burrower* still triggers if the adjacent species is owned by another player.
- *Burrower* can be triggered multiple times in one turn if the adjacent species are **attacked** multiple times (for example, by a species with *Tentacled*).
- The **attack** from *Burrower* takes place after all the triggers from the original **attack** have resolved, and before overpopulation is checked for the original **attack**. (See step 3 in the "Feeding: Order of Operations" section of the basic reference guide.)
- If someone plays a [Bioluminescent Lure](#) during an **attack** that also triggers *Burrower*, the order that the additional **attacks** occur is determined like with triggers: in turn order, then each player chooses the order of their own triggers.
- If another species is copying *Burrower* with [Hybridization](#), or if you're playing with a personal Deep deck that has multiple copies of *Burrower*, the "retaliation **attack**" from *Burrower* can trigger other **attacks** from other *Burrowers*.

Camouflage
Migrate 1 — Defensive — Defense ? — Resolution 17
[Defense +2] for each other species you have.

- If the species with *Camouflage* is your only species, *Camouflage* provides [Defense 0]. *Camouflage* still counts as a defensive trait even if it's not providing any [Defense].
- The [Defense] provided by *Camouflage* is continually updated as you get or lose species, even if you happen to get or lose a species during a feeding turn.

Cavitation Bullet
Migrate 1 — Attack 2 — Resolution 18
Never takes more than 2 population from an **attack**. Ignores all defensive traits when **attacking**.

- The take-limiting effect of *Cavitation Bullet* applies after all other effects that might reduce the amount of population taken in an **attack**, such as the target's [Defense] or the target having less population than the attacker's [Attack].
- If the ignored defensive trait triggers from the **attack**, the attacker isn't affected by it.
- If a species with *Cavitation Bullet* also has [Hydra](#), it ignores all defensive traits on all species when determining which species it can take 1 population from. This includes the [Defense] granted by [Poisonous Inking](#) or [Protective Shells](#). However, the additional population taken by *Hydra* is counted as population taken from an **attack**, so *Cavitation Bullet* still caps it at taking 2 population. At least 1 of the population must be taken from the **attack**'s actual target. (This combo is not as good as it might seem.)

Chitin-Plated Maw
Migrate 4 — Resolution 19
Before your feeding phase, **leeches 4** from the species with the greatest [Attack]. Pick one if there is a tie.

- You can't choose to **leech** from a species with 0 population. If one of the species tied for the greatest [Attack] may not be **leeched**, you must **leech** from one of the other species, even if you'd prefer not to.
- If there is only one species with the greatest [Attack], and it may not be **leeched**, then nothing happens and nothing is **leeched**. You don't get to try again with the species with the second-greatest [Attack].
- A species can't **leech** from itself. If the species with *Chitin-Plated Maw* has the greatest [Attack], nothing happens and nothing is **leeched**. You don't get to try again with the species with the second-greatest [Attack]. If it's tied for greatest [Attack], you have to **leech** from one of the other species.
- If there is a species with *Bubble Net*, its [Forage] is compared to other species' [Attack]. If the *Bubble Net* species has a greater [Forage] than any other species' [Attack], *Chitin-Plated Maw* **leeches** from the *Bubble Net* species.
- The [May not attack] icon doesn't change a species' [Attack]. A species that can't **attack** still has at least [Attack 1], and it's possible for a species that can't **attack** to still have an increased [Attack] from traits like *Speed* or *Megamouth*. These are taken into account when checking *Chitin-Plated Maw*'s effect.

Colossus
Migrate 4 — Defensive — Forage 11 — Resolution 20
May not be **attacked** by a species whose [Attack] is less than this species' [Forage]. May take less population than its [Forage].

- You may choose to have *Colossus* take less population than its [Forage] when **foraging**, even if it could take all of it.
- If *Colossus'* [Forage] is being used for taking population in a way other than **foraging**, such as **attacking** with *Bubble Net*, this effect will still apply, and *Colossus* can take less population than its [Forage] during that **attack**.
- A species with *Bubble Net* compares its own [Forage] to *Colossus'* [Forage] when determining if it can **attack** *Colossus*.

Communication
Migrate 3 — Defensive — Gain x2 — Defense 5 — Resolution 21
May have 1 extra trait. All **gains** are doubled.

- *Communication* doubles all **gains** by that species, including **gains** caused by scenarios like *Schadenfreude*.
- The effects of *Endurance* and *Rows of Teeth* don't modify the actual **gain** value itself. They're applied after *Communication* doubles the **gain**.
  - For example, a species with Surface *Bottom Feeder*, *Endurance*, and *Communication* takes 6 population when an adjacent species is **attacked**. *Bottom Feeder*'s **gain 2** is doubled to **gain 4** by *Communication*, and then it takes 2 more population with *Endurance*.
- The [Gain +1] increase from *Abundance* modifies **gain** values specifically. It applies before traits like *Communication*, so *Communication* doubles its effect.
  - For example, a species with Surface *Whale Cleaner*, *Communication*, and *Abundance* active **gains 8** when it's closest to a forager with at least [Forage 3]. *Whale Cleaner*'s **gain 3** is increased to **gain 4** by *Abundance*, and then *Communication* doubles that to **gain 8**.

- If *Protective Growth* is active, the defensive trait that was just **evolved** isn't active by the time the *Protective Growth* trigger resolves. When a species **evolves** *Communication*, it still only **gains 2** from the *Protective Growth* trigger, even though *Communication* is a defensive trait that doubles **gains**. If that species **evolves** another defensive trait afterwards, *Communication* doubles the **gain** as usual.
- If a species with *Communication* is **attacked** by a species that can ignore *Communication*, the species with *Communication* still doubles any **gains** triggered by the **attack**.

Coprophagia
Migrate 1 — Resolution 22
Before your feeding phase, takes 2 population from any player's score pile onto its species board.

- *Coprophagia* can take from your own score pile.
- A species with *Coprophagia* takes the population onto its own species board. It doesn't go to your score pile or some other location.
- Players are allowed to keep secret how much population they have in their score piles. If you choose to take from a player's score pile and it turns out they have less than 2 population there, you don't get to pick someone else's score pile instead. You take what you get.

Crushing Jaw
Migrate 1 — Resolution 23
Ignores all [Defense] when **attacking**.

- This ignores [Defense] provided by the target's own traits, as well as [Defense] provided by other effects like *Poisonous Inking* or *Protective Shells*.

Cthulhu Leech
Migrate 2 — Resolution 24
Play on any player's species. It counts as a trait and may not be removed or copied. You score 2 of its population before it ages.

- This trait can be played on other player's species as well as your own. The "you" referred to in its rules text refers to the person who played it, not the person who owns the species it's on.
- *Cthulhu Leech* still counts towards the trait limit of the species it's played on. It can't be played on a species that's at its maximum number of traits.
- If the species with *Cthulhu Leech* doesn't have 2 population when the *Cthulhu Leech* trigger resolves, *Cthulhu Leech* scores what it can. The effect of *Cthulhu Leech* doesn't count as aging, so the species won't go extinct if the *Cthulhu Leech* can't score 2 population from it.
- *Cthulhu Leech* can't be discarded, swapped, or otherwise removed from the species it's on. It's still discarded if that species goes extinct, and is still shuffled with other traits from the effects of *Radiation Blast*.
- *Cthulhu Leech* can't be copied. There are no traits in the base game that allow a species to copy other traits, but there are a few promo cards that do. (Currently, *Mimicry* and *Hybridization* can copy Deep traits.)
- *Cthulhu Leech* triggers before each time the species it's on would age. If a species would age additional times (for example, from the effects of *Degenerative Virus*), *Cthulhu Leech* will score 2 population each time.

- If the species with *Cthulhu Leech* wouldn't score any population when it ages (for example, from the effects of [Slow Metabolism](#) or [Telomere Repair](#)), it still counts as going through aging. *Cthulhu Leech* still triggers and scores 2 population.
- The *Cthulhu Leech* effect and the *Telomere Repair* **gain 2** effect trigger at the same time, and they resolve in the usual order (turn order, then each player orders their own). The *Cthulhu Leech* trigger is controlled by the player who played it, not the player who owns the species it's on.
- If another player gains control of the species with *Cthulhu Leech* through an effect like [Migratory Exodus](#) or [Mass Migration](#), that player doesn't gain control of the *Cthulhu Leech*'s effect. The player who originally played the *Cthulhu Leech* continues to score from it.
- Even though this trait has "leech" in its name, it doesn't count as a **leeching** trait, since none of its effects use the specific term "**leech**". "May not be **leeched**" effects won't prevent a *Cthulhu Leech* from being played on a species or keep it from scoring that species' population.

Deep Diver
Migrate 3 — Forage ? — Resolution 25
[Forage +2] for each Deep trait on this species. May **forage** from any Ocean zone.

- *Deep Diver* doesn't prevent the species from **foraging** from the Reef.
- The reserve bag is not an Ocean zone. *Deep Diver* doesn't allow species to **forage** from there. After the reserve tokens are placed into the Ocean, a species with *Deep Diver* can **forage** from them.
- If a species **foraging** from the Ocean causes the Ocean to become empty, the reserve tokens are immediately placed into the final Ocean zone. If the foraging species was unable to take its full **forage** value from the Ocean, it doesn't take the remainder from the reserve tokens.
- *Deep Diver* counts itself when counting how many Deep traits its species has.
- The effect of the [Snowball Earth](#) scenario applies to the total [Forage] on *Deep Diver*, not the individual [Forage +2]. If *Snowball Earth* is active, *Deep Diver* on a species with 2 other Deep traits (3 Deep traits total) has [Forage 5].
- Copies of Deep traits created by traits like [Mimicry](#) or [Hybridization](#) will count towards the number of Deep traits for *Deep Diver*'s effect.

Deep-Sea Kraken
Migrate 3 — May not forage — Resolution 26
May **attack** 1 additional time. Population from each **attack** after the first goes directly to your score pile.

- The effect of *Deep-Sea Kraken* applies on each turn. The first time *Deep-Sea Kraken* **attacks** on each turn, its effect won't apply and the population won't be scored directly. If a *Deep-Sea Kraken* makes multiple **attacks** during another player's feeding turn (for example, if it also has [Burrower](#) and is adjacent to a species that's being **attacked** multiple times), then it scores the population from each **attack** after the first.
- A species may not **attack** if it doesn't have at least 1 empty space on its species board. If a *Deep-Sea Kraken* has a full species board, it can't **attack** at all, even if the population would end up someplace besides its species board.

Defensive Spines
Migrate 1 — Resolution 27

Species lose 4 population to the Reef after **attacking** or **leeching** from this species.

- Species can still **attack** or **leech** a species with *Defensive Spines* even if they would end up losing all the population they take.
- *Defensive Spines* doesn't have a black text box, and it isn't a defensive trait, despite its name. It can't be ignored by effects that ignore defensive traits.

Dense Population
Migrate 2 — Resolution 28
May have 1 extra trait. May store 9 extra population on the species board.

- There are currently no clarifications for *Dense Population*.

Draconic
Migrate 4 — Defensive — May not forage — Attack 7 — Defense 3 — Resolution 29
Overpopulation is scored instead of lost.

- A species with *Draconic* is still considered to have overpopulated when its effect happens. If it overpopulated from its own feeding turn, it won't be able to feed again this turn. If *Draconic* overpopulates while the *Contagious Proximity* scenario is active, adjacent species still lose 3 population to the Reef.
- If *Draconic* can't overpopulate, then its effect can never trigger.
- The population loss caused by *Epizootic* is considered to be overpopulation. If a species with *Draconic* overpopulates while *Epizootic* is active, it scores all of its population instead of losing it to the Reef, and then goes extinct.

Electric Discharge
Migrate 2 — Resolution 2 — *Kickstarter Promo*
The owner of an attacked species must remove a trait from the attacked species at the end of this feeding phase. This trait doesn't trigger the turn it is played.

- The effect of *Electric Discharge* applies during all feeding phases, not just your own. If a species with *Electric Discharge* manages to **attack** during an opponent's feeding phase (for example, if it also has *Burrower*), then the attacked species must lose a trait at the end of the current feeding phase.
- A trait that can't be removed, like *Cthulhu Leech* or *Vestigial Limb*, can't be chosen to be removed. If that's the only trait left on the attacked species, then no trait is removed.
- It is possible for a species to have no traits. A species with no traits that can be removed can still be **attacked** by a species with *Electric Discharge*.
- If the species with *Electric Discharge* **attacks** multiple times in a feeding phase, each species it **attacked** has to lose a trait.
- If the species with *Electric Discharge* **attacks** the same species multiple times during a feeding phase, that species' owner must discard a trait from it for each time it was **attacked**.
- If more than one trait has to be removed at the end of the feeding phase, any consequences of losing those traits (such as losing extra population or extra traits) aren't checked until they're all removed. If one player's choices might influence the other players' choices of which traits to remove, players remove traits in turn order.

- If the attacker somehow loses *Electric Discharge* before the feeding phase ends, its effect still applies, and attacked species still have to lose a trait.
- If a species overpopulates after losing a trait due to *Electric Discharge*, that does <u>not</u> count as losing population "due to an **attack**".
- If there are multiple effects that would take place at the end of a feeding phase (for example, if both *Electric Discharge* and *Invasive Predator* had been used), those effects resolve in the usual order: turn order of the trait owners, then each player arranges their own effects.
- Swapping a trait or creating a copy of a trait doesn't count as playing it. If you swap *Electric Discharge* onto a species using *Rapid Mutation*, or copy it with an effect like *Mimicry*, then the effect of *Electric Discharge* will apply on that turn.

Electroreception
Migrate 2 — Forage 2 — Attack 2 — Resolution 30
Ignores 1 defensive trait when **attacking**.

- If the ignored defensive trait triggers from the **attack**, the attacker isn't affected by it.
- If the target has multiple copies of the same defensive trait, *Electroreception* only ignores 1 of those copies.

Endurance
Migrate 3 — Gain +2 — Resolution 31
Aging +2. Takes 2 extra population when it **gains**.

- The 2 extra population is taken at the same time as the **gain** and from the same source as the **gain**.
- *Endurance* doesn't modify the actual **gain** value itself. Effects that modify the **gain** value directly, like *Communication*, won't double the 2 extra population. For example, a species with Surface *Bottom Feeder*, *Endurance*, and *Communication* takes 6 population when an adjacent species is **attacked**. *Bottom Feeder*'s **gain 2** is doubled to **gain 4** by *Communication*, and then it takes 2 more population with *Endurance*.

Epizootic Parasite
Migrate 2 — Resolution 32 — *Bundle #1*
Before your feeding phase, **leeches 1** from each species with [May not forage].

- A species can't take from itself. If *Epizootic Parasite* also has a [May not forage] icon, it won't take any population from itself.

Extremophile
Migrate 1 — Resolution 33
May have 1 extra trait. May not be **leeched**. Never overpopulates. Never goes extinct.

- A species with *Extremophile* never goes extinct, for any reason.
- If the *Aggressive Environment* scenario is active, an *Extremophile* with 0 population can still be **attacked**, but it won't go extinct.

Fast Life Cycle
Migrate 5 — Resolution 34 — *Bundle #1*

After aging, scores all population.

- The effect of *Fast Life Cycle* happens after each time it ages, not just during your own aging phase. If an effect like [Hostile Conditions](#) causes the species with *Fast Life Cycle* to age on an opponent's turn also, you score all of its remaining population after that aging as well.
- The effect of *Fast Life Cycle* isn't aging. If a species with *Fast Life Cycle* has no population left to score after aging, it won't go extinct. [Telomere Repair](#) doesn't prevent *Fast Life Cycle* from scoring population.
- The effect of *Fast Life Cycle* isn't optional.

Fast Metabolism
Migrate 1 — Resolution 35
May age on any player's aging phase.

- *Fast Metabolism* gives you the option to age this species during other players' aging phases. It doesn't make required aging optional. You still have to age the species with *Fast Metabolism* during your own aging phase.
- If the species with *Fast Metabolism* has other effects that trigger before or after a species ages, like [Cthulhu Leech](#) or [Telomere Repair](#), they trigger if it ages on other players' turns.
- A species with *Fast Metabolism* can also have [Slow Metabolism](#). Such a species could essentially choose whether or not to age during any aging phase.
- If the [Degenerative Virus](#) scenario is active and the species with *Fast Metabolism* ages during another players' turn, that player can choose to have the *Fast Metabolism* species age a second time. This aging is not optional.

Feeding Frenzy
Migrate 4 — Event — Resolution 99 — *Bundle #2*
Instead of your usual feeding turn, each of your species without [May not attack] may **attack** this turn.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.
- Once you've replaced your normal feeding turn with an effect like *Feeding Frenzy*, you can't use another event like [Blood Bath](#) to replace it again. You can only play one "instead of your normal feeding turn" event per turn.
- In between each feeding, triggers will resolve, overpopulation will be checked, and scenarios will be activated or deactivated.
- Species with *Tentacled* or other traits that allow them to feed additional times may **attack** additional times during *Feeding Frenzy*. They can't use the additional feedings to **forage**. Species that **attack** multiple times during *Feeding Frenzy* have to take their additional feedings consecutively.
- A species that makes a "retaliation **attack**" with an effect like [Bioluminescent Lure](#) or [Burrower](#) during a *Feeding Frenzy* can still take a regular feeding turn. Likewise, a species that's already taken its regular feeding turn can still make a "retaliation **attack**" later in the turn.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can

still feed later in that turn. If one of your species overpopulates because one of your other species **attacked** during a *Feeding Frenzy*, that species can still **attack** later in the turn.
- Species that can ignore their own [May not attack] icons, like species with [Bubble Net](#), can **attack** during a *Feeding Frenzy*.
- Eligibility to **attack** is determined as each feeding turn begins. If one of your species loses all of its [May not attack] icons during the feeding phase (perhaps by using [Rapid Mutation](#) to swap those traits away, for example), then it can take a feeding turn and **attack**.

Filter Feeder
Migrate 2 — Forage 6 — May not attack — Resolution 36
Never overpopulates. May store 5 extra population on the species board.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Filter Feeder* has an additional point of [Forage] and allows the species to store 5 extra population on the species board.
- The Deep version of *Filter Feeder* does not count as a Surface trait.

Filter Kraken
Migrate 1 — May not attack — Resolution 37
May **forage** 2 additional times.

- *Filter Kraken* must **forage** first in order for it to **forage** 2 additional times. If the species with *Filter Kraken* manages to **attack** (for example, with the effect of [Bubble Net](#)), then it can't **forage** 2 times afterwards.
- A species with *Filter Kraken* doesn't have to use all of its additional **forages**. It may **forage** just 1 additional time if you want.

Flight
Migrate 1 — Defensive — Resolution 38
May not be **attacked** unless the attacker has *Speed*. Ignores *Schooling* and *Inking* when **attacking** a species without a Deep trait.

- Conditions for "ignore" effects are checked simultaneously before anything is ignored. If a species with *Flight* has other traits that allow it to ignore all of a potential target's Deep traits, those Deep traits are still considered for *Flight*'s "ignore" effect.
- A species with the Deep version of [Speed](#) can **attack** a species with *Flight*.
- Defensive traits that are ignored by the attacker won't be triggered by the **attack**.

Gargantuan
Migrate 4 — May not forage — Attack 9 — Resolution 39
May not **attack** a species unless that species has at least 7 population. Ignores "may not be **attacked**" effects.

- "May not **attack**" effects on the attacker are different from "may not be **attacked**" effects on the target. *Gargantuan*'s second ability doesn't cancel out its first.
- Ignoring "may not be **attacked**" effects won't ignore other effects of defensive traits, such as [Defense] or effects triggered by the **attack**.

Gene Transfer
Migrate 1 — Left + right arrows — Resolution 40
May have 2 extra traits. Before your feeding phase, may swap Surface traits for traits on one of your adjacent species.

- Only Surface traits can be swapped from the species with *Gene Transfer* onto the other species. The traits swapped onto *Gene Transfer* from the other species can be Surface or Deep traits. You can't swap *Gene Transfer* onto another species this way.
- You can make multiple swaps when the *Gene Transfer* trigger resolves. Treat the swaps as if they occurred simultaneously, even if you make your choices and physically swap the cards one at a time. Remember that the species with *Gene Transfer* can't give Deep traits in the swap, but it can receive them.
- Swapping a trait to another species counts as removing it. You can't use *Gene Transfer* to swap traits that may not be removed, such as *Cthulhu Leech* or *Vestigial Limb*.
- Swapping a trait onto a species doesn't count as playing or **evolving** it. For example, if you swap a defensive trait onto a species while the *Protective Growth* scenario is active, that species won't **gain 2**.
- Copies of traits created by traits like *Intelligence* can't be swapped to or from a species. Only traits on actual cards can be swapped.
- A trait that's already been swapped before this feeding phase, from an effect like *Atavism* or a second *Gene Transfer*, can be swapped again with *Gene Transfer*. Since both *Atavism* and *Gene Transfer* trigger before your feeding phase, you can arrange those triggers how you like.

Gentle Giant
Migrate 2 — Defensive — Forage 3 — May not attack — Resolution 41
May not be **attacked**. May store 5 extra population on the species board.

- There are currently no clarifications for *Gentle Giant*.

Giant Cephalopod
Migrate 3 — Resolution 42
May feed 3 additional times.

- A species with *Giant Cephalopod* doesn't have to use all of its additional feedings. It may feed just 1 or 2 additional times if you want.

Gigantic Brain
Migrate 4 — Resolution 43
May have any number of traits. Ages population equal to the number of traits it has. Other effects may never change this amount.

- Errata: Some printings have the word "reduce" instead of "change".
- A species with *Gigantic Brain* always ages population equal to the number of traits it has. This amount can't be changed by anything that alters a species' aging rate: scenarios, the Cambrian Explosion, game rules, other traits, or anything else. This includes effects that increase aging (*Schooling*, *Inhospitable Environment*, *Warm-Blooded*, etc.) and effects that decrease it (*Slow Metabolism*, *Hibernating*, etc.).

- A species with *Gigantic Brain* can still have traits that change its aging rate (like *Schooling*). The effects that modify its aging won't do anything, but any other effects of those traits still apply.
- It's still possible for a species with *Gigantic Brain* to age less population than required if it doesn't have enough population to age the full amount. It will probably go extinct as a result.
- The effect of [Telomere Repair](#) doesn't change how much population a species needs to age. It simply makes that amount irrelevant. If a species with *Telomere Repair* also has *Gigantic Brain*, it won't score any population during aging.
- Copies of traits created by traits like [Intelligence](#), [Hybridization](#), and [Mimicry](#) count towards *Gigantic Brain*'s effect.

Gigantic Scavenger
Migrate 4 — May not forage — Attack 6 — Resolution 44
After a species with [Attack 5] or more **attacks**, takes 2 population from that species.

- When *Gigantic Scavenger* takes population from an attacker, the attacker is considered to have lost population "due to an **attack**" for traits that care about that. This is because *Gigantic Scavenger*'s effect is specifically triggered by **attacking**.
- Species can't take from themselves. If *Gigantic Scavenger* **attacks** with at least [Attack 5], its effect doesn't trigger and it won't take or lose any of its own population.

Go Fish
Migrate 1 — Event — Resolution 100 — *Bundle #2*
Name a Surface trait. Everyone gives you all copies of that trait from their hand. Play every card you get.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.
- You can choose any Surface trait, whether or not you have any copies of that trait in your hand. If you already have copies of that Surface trait in your hand, treat them as if you gave them to yourself. You can, and must, play them as part of the effect of *Go Fish*.
- The cards played with *Go Fish* are played as part of the same action as *Go Fish*. You can play them as traits to **evolve** species or use them to **migrate**, just as you would normally. You must play all the cards you get, as well as any cards with the chosen name that you already had.
- *Go Fish* only lets you get and play Surface traits. You won't get the Deep version of the Surface trait you named, even if another player has it. You can't play the Deep version of the Surface trait you named, even if you already had it in your hand.
- Players have to give you all the copies of the named trait they have in their hands, and you have to play any copies of the named trait that you already had in your hand. Secretly keeping a copy of the named trait in your hand is cheating. Dealing with cheating is currently beyond the scope of this document; consult your playgroup and local laws for guidance.

Goethite Exoskeleton
Migrate 1 — Defensive — Resolution 45
May have 1 extra trait. May not be **attacked** by a species with less than [Attack 9].

- If the attacker has *Bubble Net*, *Goethite Exoskeleton* checks the attacker's [Forage] instead of its [Attack] when determining if it can **attack**.
- *Goethite Exoskeleton* doesn't reduce the amount of population taken by an attacker. If an attacker has [Attack 9], it still takes 9 population.

Grazer
Migrate 1 — Resolution 46
Before your feeding phase, takes 2 population from the Reef.

- If there is only 1 population in the Reef, *Grazer* just takes 1. If there is no population in the Reef, *Grazer*'s effect does nothing.

Great Migration
Migrate 1 — Event — Resolution 101 — *Bundle #2*
Migrate up to 10 population from the Ocean or the Reef. You may rearrange the order of your species boards.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The rules section has further details about how events work.
- You have to **migrate** at least 1 population. You can't choose to **migrate** 0 population.
- The population that is **migrated** must come from the same place and go to the same place. You can't take some population from the Reef and some from the Ocean, or from two Ocean zones.
- The species boards that you rearrange keep their traits and population when they're moved.

Hard Shell
Migrate 1 — Defensive — Defense 6 — Resolution 47

- There are currently no clarifications for *Hard Shell*.

Hibernating
Migrate 3 — Defensive (upside down text only) — Resolution 102 — *Bundle #2*
[Right side up]: May feed 2 additional times. After aging, you may rotate this card.
[Upside down]: Aging -1. May not feed or be **attacked**. After aging, you may rotate this card.

- *Hibernating* has two text boxes in one, representing two different states that the trait can be in. The card is played with the card name right-side up and the migrate number in the bottom left corner, like any other trait. When the text says "rotate", that means to rotate the card 180 degrees so that the other text box is right-side up. Whichever text is right-side up at any given moment is the text box that has an effect. The other text box is simply disregarded entirely.
- *Hibernating* only counts as a defensive trait if the "upside-down" text box is in effect.
- The "Aging -1" effect can't reduce a species' aging rate below 0.
- If a species with *Hibernating* ages nothing, because of an effect like *Slow Metabolism* or *Telomere Repair*, it still counts as having gone through aging. You can rotate *Hibernating* after it would have aged.

- You may rotate *Hibernating* after each time the species would age. If it would age multiple times in one aging phase from the effect of *Degenerative Virus*, you may choose to rotate it after each time.
- "May not feed" is shorthand for "may not **attack** or **forage**". This includes **attacks** made outside of a usual feeding turn from effects like *Burrower*.
- If a species creates a copy of *Hibernating* with an effect like *Hybridization*, the copy is created "right-side up" as if it were just played, regardless of the state of the trait that's being copied. A copy of *Hibernating* can be rotated independently of the original trait it's copying. (A physical marker may be useful as a memory aid.)

Hybridization
Migrate 5 — Left arrow — Resolution 3 — *Kickstarter Promo*
Has a copy of each trait of the species to its left.

- *Hybridization* has an effect that creates copies of traits. These copies don't have to be represented by a physical card. The species just has the effects of those traits as if the physical card were next to its species board.
- Copies of traits have all the characteristics printed on the original trait card. They're treated just like ordinary traits, with a few exceptions. They don't count towards a species' trait limit. They can't be copied. They can't be swapped or discarded from the species they're on. They disappear if the trait that made them is lost. The rules section has further details about how copies of traits work.
- *Hybridization* copies both Deep and Surface traits. It can copy traits from an opponent's species.
- The copy ability of *Hybridization* isn't optional. You don't get to pick which traits to copy. It copies all the traits on the adjacent species (except for other copies), even if having copies of those traits would be inconvenient.
- The copies created by *Hybridization* exist as soon as the original trait is played onto the adjacent species, and stop existing as soon as the original trait is removed.
- When *Hybridization* creates a copy of a trait, that trait isn't considered to have been played on that species. It just begins to exist. Effects that trigger when a trait is played won't trigger from the creation of the copy, although they may trigger from the playing of the original trait.

Hydra
Migrate 4 — May not forage — Attack 4 — Resolution 48
When **attacking**, may also take 1 population from any number of species without a defensive trait.

- When **attacking**, *Hydra* can't target a species if it can't take at least 1 population from that target, even if it could take other population during the **attack**.
- Species that don't have defensive traits of their own but have [Defense] from some other source, such as an adjacent species with *Poisonous Inking* or an active *Protective Shells* scenario, still count as having a defensive trait for the purposes of *Hydra*. *Hydra* can't take 1 population from those species when **attacking** unless it has some way to ignore the [Defense].
- *Hydra* can't take more population from other species than it has room for on its species board.
- The additional population that *Hydra* takes while **attacking** are counted as losses "due to an **attack**" for traits that care about that.
- When *Hydra* takes population from other species during an **attack**, those other species aren't counted as having been **attacked**. Only the actual target has been **attacked**.

Impostor Cleaner
Migrate 1 — Resolution 49
When *Shark Cleaners* **gain**, takes 1 population from each of them.

Migrate 1 — Resolution 50
When *Whale Cleaners* **gain,** takes 1 population from each of them.

- Errata: Some printings of both versions of *Impostor Cleaner* say "after" instead of the correct "when". The taking occurs during the **gain**, not after. Also, some printings of the *Shark Cleaner* version are missing the word "from".
- There are two versions of *Impostor Cleaner* in the base game. One takes from *Shark Cleaners* and the other takes from *Whale Cleaners*. They both work the same way, except for which type of "Cleaner" trait they apply to.
- The effect of *Impostor Cleaner* isn't a trigger. It applies while the *Shark/Whale Cleaner* is **gaining**. The *Impostor Cleaner* takes 1 of the population that the *Shark/Whale Cleaner* would have **gained**.
- The *Shark/Whale Cleaner* doesn't lose any population. It never had that population in the first place. The population goes directly to the *Impostor Cleaner* from whichever Ocean zone the *Shark/Whale Cleaner* was **gaining** from. In the case of *Shark Cleaner*, this does <u>not</u> trigger effects that care about losing population "due to an **attack**".
- Species can't take from themselves. *Impostor Cleaner* doesn't affect the **gains** of *Shark/Whale Cleaners* on the same species.
- *Impostor Cleaner* will affect the **gains** of any trait named *Shark Cleaner* or *Whale Cleaner*, as appropriate. This includes the Deep versions of [Shark Cleaner](#) or [Whale Cleaner](#).
- *Impostor Cleaner* refers specifically to traits named *Shark Cleaner* or *Whale Cleaner*, not simply any species with *Shark Cleaner* or *Whale Cleaner*. If a species with *Shark/Whale Cleaner* has another trait that triggers, but the *Shark/Whale Cleaner* trait itself doesn't **gain**, *Impostor Cleaner* doesn't take any population.
- If a *Shark/Whale Cleaner* trait **gains** for some other reason besides its printed text, *Impostor Cleaner* still takes 1 population during that **gain**. For example, if the [Population Explosion](#) scenario event is triggered, each *Shark/Whale Cleaner* triggers, and the relevant *Impostor Cleaner* takes 1 population from each of those **gains**.
- If a *Shark/Whale Cleaner* would trigger but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** and *Impostor Cleaner* takes nothing.
- If a *Shark/Whale Cleaner* triggers but doesn't have room on its species board for the total of its **gain**, *Impostor Cleaner* takes 1 population before the *Shark/Whale Cleaner* determines how much population it can fit on its species board. For example, if a Surface *Whale Cleaner* **gains 3**, but only has 1 open space on its species board, the relevant *Impostor Cleaner* takes 1 population and the *Whale Cleaner* **gains 1**, filling its species board. The 3rd population that would have been **gained** simply remains in the Ocean.
- If an *Impostor Cleaner* can't take population when a *Shark/Whale Cleaner* **gains** (most likely because it has no more room on its species board), it doesn't take the population and the *Shark/Whale Cleaner* gets to take the full amount it **gains**.
- If [Sparkles](#) has a *Shark Cleaner* or *Whale Cleaner* that **gains**, the relevant variety of *Impostor Cleaner* takes 1 population before *Sparkles* divides up the taken population.

Inking
Migrate 1 — Defensive — Defense 4 — Resolution 51
Species lose 3 population to the Reef after **attacking** this species.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Inking* causes attackers to lose 3 population to the Reef after **attacking** the species with *Inking*. The losses caused by *Inking* are considered to be "due to an **attack**" for traits that care about that.
- The Deep version of *Inking* does not count as a Surface trait.

Intelligence
Migrate 2 — Left + right arrows — Resolution 4 — *Kickstarter Promo*
Before each feeding phase, choose a Surface trait on an adjacent species. Until the end of the turn, this species has a copy of the chosen trait.

- *Intelligence* has an effect that creates copies of traits. These copies don't have to be represented by a physical card. The species just has the effects of those traits as if the physical card were next to its species board.
- Copies of traits have all the characteristics printed on the original trait card. They're treated just like ordinary traits, with a few exceptions. They don't count towards a species' trait limit. They can't be copied. They can't be swapped or discarded from the species they're on. They disappear if the trait that made them is lost. The rules section has further details about how copies of traits work.
- The copy ability of *Intelligence* isn't optional. You have to copy an adjacent species' Surface trait if one is available, even if all your options are inconvenient. If neither adjacent species has a Surface trait, then *Intelligence* doesn't make any copies at all.
- Each Surface trait has a Deep version. *Intelligence* can only copy the Surface versions of those traits; it can't copy Deep traits.
- When *Intelligence* creates a copy of a trait, that trait isn't considered to have been played on that species. It just begins to exist. Effects that trigger when a trait is played won't trigger from the creation of the copy.
- The copies created by *Intelligence* exist as soon as the trigger resolves, and stop existing as soon as the current turn ends. If the original trait is somehow removed from the adjacent species while *Intelligence* is still copying it, the copy persists until the end of the current turn.
- When the *Intelligence* trigger resolves on your turn, it's still before your feeding phase. If your *Intelligence* copies a *Parasitic* on your turn, its trigger goes off as soon as the copy of *Parasitic* begins to exist. You can arrange that trigger along with your other unresolved "before your feeding phase" triggers. The copy of *Parasitic* still triggers even if the original *Parasitic* trait has already triggered before this feeding phase.

Invasive Predator
Migrate 3 — Resolution 5 — *Kickstarter Promo*
Species **attacked** by this species go extinct if they have 0 population at the end of this feeding phase. This trait doesn't trigger the turn it is played.

- Species **attacked** by *Invasive Predator* don't go extinct until the end of that feeding phase, and only if they have 0 population. If a species can increase its population before the feeding phase ends, it won't go extinct.

- A species that was **attacked** by *Invasive Predator* and that has 0 population at the end of the feeding phase still goes extinct, even if the **attack** from *Invasive Predator* isn't what caused it to have 0 population.
- If a species with *Invasive Predator* **attacks** during another player's feeding phase (for example, with [Burrower](#)), its effect still triggers.
- If the attacker somehow loses *Invasive Predator* before the feeding phase ends, its effect still applies, and attacked species with 0 population still go extinct.
- If there are multiple effects that would take place at the end of a feeding phase (for example, if both [Electric Discharge](#) and *Invasive Predator* had been used), those effects resolve in the usual order: turn order of the trait owners, then each player arranges their own effects.
- Swapping a trait or creating a copy of a trait doesn't count as playing it. If you swap *Invasive Predator* onto a species using [Rapid Mutation](#), or copy it with an effect like [Mimicry](#), then the effect of *Invasive Predator* will apply on that turn.

Kleptoparasitic
Migrate 2 — Left + right arrows — Resolution 52
Aging +2. After an adjacent species **attacks**, takes 1 population from that species.

- When *Kleptoparasitic* takes population from an attacker, the attacker is considered to have lost population "due to an **attack**" for traits that care about that. This is because *Kleptoparasitic*'s effect is specifically triggered by **attacking**.
- *Kleptoparasitic* is not a **leeching** trait and doesn't count as a trait named *Parasitic*.

Leviathan
Migrate 3 — Defensive — May not forage — Attack 5 — Resolution 53
Aging +1. May not be **attacked**.

- There are currently no clarifications for *Leviathan*.

Living Ecosystem
Migrate 1 — Forage 2 — Resolution 54
Before your feeding phase, **migrate** population equal to this species' [Forage] from any Ocean zone to the Reef.

- The effect of *Living Ecosystem* counts as population being **migrated** to the Reef for the effect of [Zooplankton](#). It doesn't count as a **migrate** action for the purposes of the [Detritus](#) scenario.
- If the species with *Living Ecosystem* also has [Colossus](#), it still has to **migrate** the full amount of its **forage** value. *Colossus'* effect doesn't apply because the species isn't taking the population.

Luminous Bacteria
Migrate 1 — Resolution 55
May have 1 extra trait. May **forage** from any Ocean zone.

- *Luminous Bacteria* doesn't prevent the species from **foraging** from the Reef.
- The reserve bag is not an Ocean zone. *Luminous Bacteria* doesn't allow species to **forage** from there. After the reserve tokens are placed into the Ocean, a species with *Luminous Bacteria* can **forage** from them.

- If a species **foraging** from the Ocean causes the Ocean to become empty, the reserve tokens are immediately placed into the final Ocean zone. If the foraging species was unable to take its full **forage** value from the Ocean, it doesn't take the remainder from the reserve tokens.
- This trait is mostly redundant with the _Long Haul Migration_ scenario. If that scenario is active, there's no special cumulative bonus to having _Luminous Bacteria_ also.

Massive Fins
Migrate 3 — Forage 8 — May not attack — Resolution 56
After this species **forages**, every _Parasitic_ **leeches 1** from it. May **forage** from any Ocean zone.

- Errata: Some printings have "When this species **forages**" instead of the correct "After".
- _Massive Fins_ doesn't prevent the species from **foraging** from the Reef.
- The reserve bag is not an Ocean zone. _Massive Fins_ doesn't allow species to **forage** from there. After the reserve tokens are placed into the Ocean, a species with _Massive Fins_ can **forage** from them.
- If a species **foraging** from the Ocean causes the Ocean to become empty, the reserve tokens are immediately placed into the final Ocean zone. If the foraging species was unable to take its full **forage** value from the Ocean, it doesn't take the remainder from the reserve tokens.
- If a species has multiple _Parasitic_ traits, that species **leeches 1** population from _Massive Fins_ multiple times, once for each one of those traits.
- If there are multiple _Parasitic_ traits, they **leech** in turn order, and each player can arrange the order their own _Parasitic_ traits **leech**. This can be relevant if there are more _Parasitic_ species in play than there is population on _Massive Fins_.
- The Deep version of _Parasitic_ also **leeches** from _Massive Fins_ when it triggers.
- A species can't **leech** from itself. If _Massive Fins_ also has _Parasitic_, that _Parasitic_ doesn't **leech** anything.
- After _Massive Fins_ **forages**, _Parasitic_ traits **leech** from it before overpopulation is checked. In effect, as long as there is at least one _Parasitic_ that can **leech** from it, a species with _Massive Fins_ won't overpopulate from its own **foraging**.

Megamouth
Migrate 1 — Forage 5 — Attack 5 — Resolution 57

- There are currently no clarifications for _Megamouth_.

Migratory Exodus
Migrate 10 — Event — Resolution 6 — _Kickstarter Promo_
Pay the cost into another player's score pile and take one of their species, with population.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.
- The cost of _Migratory Exodus_ doesn't go to a Reef or Ocean zone. It goes straight from your score pile to the score pile of the player you're taking a species from.
- When you take the species, you may put it anywhere in your species line. It keeps its population and traits.
- There is currently no way to prevent a player from taking one of your species with _Migratory Exodus_.

- If you use *Migratory Exodus* to take a species with [Cthulhu Leech](), you don't gain control of the *Cthulhu Leech*'s effect. The player who originally played the *Cthulhu Leech* continues to score from it.

Migratory Filter Feeder
Migrate 5 — Forage 6 — May not attack — Resolution 58
May store 9 extra population on the species board. May **forage** from any Ocean zone.

- *Migratory Filter Feeder* doesn't prevent the species from **foraging** from the Reef.
- The reserve bag is not an Ocean zone. *Migratory Filter Feeder* won't allow species to **forage** from there. After the reserve tokens are placed into the Ocean, a species with *Migratory Filter Feeder* can **forage** from them.
- If a species **foraging** from the Ocean causes the Ocean to become empty, the reserve tokens are immediately placed into the final Ocean zone. If the foraging species was unable to take its full **forage** value from the Ocean, it doesn't take the remainder from the reserve tokens.

Mimicry
Migrate 2 — Resolution 7 — *Kickstarter Promo*
At the start of each turn, choose a trait in the Gene Pool. Until the end of the turn, this species has a copy of the chosen trait.

- *Mimicry* has an effect that creates [copies of traits](). These copies don't have to be represented by a physical card. The species just has the effects of those traits as if the physical card were next to its species board.
- Copies of traits have all the characteristics printed on the original trait card. They're treated just like ordinary traits, with a few exceptions. They don't count towards a species' trait limit. They can't be copied. They can't be swapped or discarded from the species they're on. They disappear if the trait that made them is lost. The [rules section]() has further details about how copies of traits work.
- The copy ability of *Mimicry* isn't optional. You have to copy a trait from the Gene Pool, even if all your options are inconvenient.
- *Mimicry* can only copy Deep traits. It can't copy Deep events. If all face-up cards in the Gene Pool are Deep events, *Mimicry* has nothing to copy and no copy is created.
- The copies created by *Mimicry* exist as soon as the trigger resolves, and stop existing as soon as the current turn ends. If the original trait is somehow removed from the Gene Pool while *Mimicry* is still copying it, the copy persists until the end of the current turn.
- When *Mimicry* creates a copy of a trait, that trait isn't considered to have been played on that species. It just begins to exist. Effects that trigger when a trait is played won't trigger from the creation of the copy.
- *Mimicry* doesn't trigger until the start of each turn. The turn you play *Mimicry*, it won't create a copy of anything.
- If the trait copied by *Mimicry* is still in the Gene Pool when the current turn ends, you can choose to copy it again when the next turn begins. However, the trait still disappears in between turns. If the trait being copied allowed the species to have extra population or traits, like [Dense Population](), any extra population or traits above the species' usual limit have to be discarded when the copy of that trait disappears at the end of the turn.

Mucus Cocoon
Migrate 1 — Resolution 59
May not be **leeched**. Before your feeding phase, species with a **leeching** trait lose 1 population to the Reef.

- If the species with *Mucus Cocoon* also has a **leeching** trait, it also loses 1 population to the Reef before your feeding phase.
- Species with multiple **leeching** traits still only lose 1 population to the Reef.

Mutualism
Migrate 1 — Gain 1 — Resolution 60
Gains 1 for each *Symbiotic* that triggers.

- *Mutualism* triggers as soon as the *Symbiotic* traits are triggered, not when they resolve. For game purposes, *Mutualism* is triggered simultaneously with the *Symbiotics*.
- *Mutualism* is triggered by *Symbiotic* traits on the same species.
- *Mutualism* is triggered by any trait named *Symbiotic*. This includes the Surface version of *Shark Cleaner* as well as the [Deep version](#).
- The trigger of *Mutualism* refers specifically to traits named *Symbiotic*, not simply any species with *Symbiotic*. If a species with *Symbiotic* has another trait that triggers, but *Symbiotic* itself doesn't, *Mutualism* doesn't trigger.
- *Mutualism* triggers a separate time for each *Symbiotic* trait that triggers, and each of those counts as a separate **gain**. Effects that modify a species' **gains** affect each one individually. For example, if the [*Abundance*](#) scenario is active, a species with *Mutualism* **gains 2** for each *Symbiotic* that triggers.
- It is possible for *Mutualism*'s triggers to resolve before the *Symbiotics* that triggered it in the first place, if the *Mutualism* is owned by a player who comes earlier in the turn order than the *Symbiotics*.
- If a *Symbiotic* triggers for some other reason besides its printed text, *Mutualism* still triggers. For example, if the [*Population Explosion*](#) scenario event is triggered, *Mutualism* triggers, each *Symbiotic* triggers, and those triggers in turn trigger *Mutualism* again.
- If a *Symbiotic* would trigger but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** and its trigger doesn't go off. *Mutualism* won't trigger.

Neurotoxin
Migrate 1 — Resolution 61
Species lose 2 population to the Reef after they **attack** or are **attacked** by this species.

- Even though it affects **attacks**, *Neurotoxin* doesn't have a black text box, and it isn't a defensive trait. It can't be ignored by effects that ignore defensive traits.
- *Neurotoxin* doesn't affect how much population a species takes in an **attack**. A species can still **attack** a species with *Neurotoxin*, even if all the population it takes would be lost to the Reef.
- The losses caused by *Neurotoxin* are considered to be "due to an **attack**" for traits that care about that.
- The *Neurotoxin* trigger is owned by the player who owns the species with *Neurotoxin*, regardless of whether their species is **attacking** or being **attacked**. It resolves in their place in the turn order.

Nomadic

Migrate 1 — Double left + right arrows — Resolution 62 — *Bundle #1*
Adjacency arrows on this species are extended by 1 species. You choose the target for **leeching** effects.

- *Nomadic*'s effect only applies to adjacency arrows on that species and their related effects. It won't apply to scenarios that care about adjacency. For example, if a species with *Nomadic* overpopulates while [Contagious Proximity](#) is active, only the two directly-adjacent species lose 3 to the Reef.
- *Nomadic*'s effect isn't reciprocal. Species that are 2 spaces away trigger traits with adjacency arrows on *Nomadic*, but the species with *Nomadic* doesn't trigger traits with adjacency arrows on species 2 spaces away.
- A species can't be adjacent to itself, even if its adjacency arrows wrap around the whole ecosystem.
- A species can't be adjacent to another species more than once. If the ecosystem has 4 or fewer species, it's possible for another species to be adjacent to the species with *Nomadic* from both the left and the right. If an adjacency trait on *Nomadic* would be triggered by another species that's adjacent to it in both directions, that trigger only goes off once.
- *Nomadic* doesn't make a species closer to an attacker or forager for the purposes of *Shark Cleaners* and *Whale Cleaners*. For example, say there are 4 species in a row like this:
  - A: *Nomadic + Whale Cleaner*
  - B: *Whale Cleaner*
  - C: *Filter Feeder*
  - D: *Whale Cleaner*

  When species C **forages**, the *Whale Cleaners* on species B and D trigger, but not the one on species A.
- If a trait on a *Nomadic* species only has an adjacency arrow in one direction, it doesn't get an adjacency arrow in the other direction.
- A species with *Nomadic* and [Hybridization](#) has a copy of each trait on both species to its left — the one right next to it and the one 2 spaces away. You don't have to pick one species to copy from.
- If you're playing with a personal Deep deck that has multiple copies of *Nomadic*, its effects are cumulative. A species with two *Nomadics* is adjacent to all species within 3 spaces, and so on.

Osteodermal Kaiju

Migrate 5 — Defensive — May not forage — Attack 8 — Defense 8 — Resolution 63 — *Bundle #1*
Aging +4. Never overpopulates.

- There are currently no clarifications for *Osteodermal Kaiju*.

Overgrazing

Migrate 3 — Event — Resolution 8 — *Kickstarter Promo*
Instead of your normal feeding turn, each of your species without [May not forage] may **forage** this turn. After your feeding phase, move all population in the Reef to an Ocean zone.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.

- Once you've replaced your normal feeding turn with an effect like *Overgrazing*, you can't use another event like *Feeding Frenzy* to replace it again. You can only play one "instead of your normal feeding turn" event per turn.
- In between each feeding, triggers resolve, overpopulation is checked, and scenarios are activated or deactivated.
- After your feeding phase, you choose which Ocean zone to move all the population in the Reef into. If there is no population in the Reef after your feeding phase, nothing happens. You don't have to leave any population in the Reef while your species are **foraging**.
- Species don't have to **forage** from the Reef during *Overgrazing* if they can **forage** from other places. Only the Reef loses its population to the Ocean after the feeding phase ends, even if some species **foraged** from other places. The Reef still loses population even if none of the species that fed **foraged** from it.
- Species with *Tentacled* or other traits that allow them to feed additional times may **forage** additional times during *Overgrazing*. They can't use the additional feedings to **attack**. Species that **forage** multiple times during *Overgrazing* have to take their additional feedings consecutively.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can still feed later in that turn. If one of your species overpopulates because one of your other species **foraged** during an *Overgrazing*, that species can still **forage** later in the turn.

Pack Hunting
Migrate 1 — Attack x2 — Resolution 64
May have 1 extra trait. Doubles each [Attack] on this species' traits.

- This effect only doubles the [Attack] of this species' traits. If another effect is giving this species [Attack], like the *Large Predators* scenario, that [Attack] won't be doubled.
- A species automatically gets [Attack 1] if its [Attack] would be less than 1. If a species has *Pack Hunting* but no other traits with [Attack], its [Attack] is still increased to 1. *Pack Hunting* doesn't double it to [Attack 2].
- The [Attack -1] effect of the *Snowball Earth* scenario applies after the [Attack] is doubled by *Pack Hunting*. A trait with [Attack 3] is doubled to [Attack 6], and then *Snowball Earth* reduces it to [Attack 5].

Paralyzing Venom
Migrate 1 — Resolution 9 — *Kickstarter Promo*
Species **attacked** by this species may not **attack** or **forage** until after their next feeding phase. This trait doesn't trigger the turn it is played.

- The effect of *Paralyzing Venom* prevents the attacked species from doing any kind of **foraging** or **attacking**, even **attacks** made outside its usual feeding phase from effects like *Bioluminescent Lure*.
- The phrase "their next feeding phase" refers to the next feeding phase of the attacked species' owner, on that player's next turn.
- Effects that allow additional species to feed in one turn, like *Voracious Feeder* or *Overgrazing*, don't create additional feeding phases. All the species feed as part of one single feeding phase. Each player's turn has one feeding phase.

- A "may not **attack**" effect isn't the same as having a [May not attack] icon. If a species with *Bubble Net* is affected by the "may not **attack**" effect from *Paralyzing Venom*, it can't ignore that effect.
- Swapping a trait or creating a copy of a trait doesn't count as playing it. If you swap *Paralyzing Venom* onto a species using *Rapid Mutation*, or copy it with an effect like *Mimicry*, then the effect of *Paralyzing Venom* will apply on that turn.

Parasite Cleaner
Migrate 1 — Resolution 65
Before your feeding phase, takes 1 population from every species with a **leeching** trait.

- A species can't take from itself. If *Parasite Cleaner* also has a **leeching** trait, it won't take any population from itself.
- If a species has multiple **leeching** traits, *Parasite Cleaner* only takes 1 population from it.
- A **leeching** trait is one that allows its species to **leech** and specifically uses the word "**leech**" in its rules text. Despite its name, *Cthulhu Leech* is not a **leeching** trait.

Parasitic
Migrate 1 — Left + right arrows — Resolution 66
Before your feeding phase, **leeches 2** from an adjacent species.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Parasitic* can **leech** from either adjacent species, not just one. Choose one of those species when the *Parasitic* trigger resolves.
- You can't choose to **leech** from a species with 0 population or that otherwise may not be **leeched**. If one of the species adjacent to Deep *Parasitic* may not be **leeched**, you must **leech** from the other species, even if you'd prefer not to.
- The Deep version of *Parasitic* does not count as a Surface trait, but it does count as a trait named *Parasitic*. For example, it will take 1 population from a species with *Massive Fins* after that species **forages**.

Pathogen Cultivation
Migrate 2 — May not forage — Attack 5 — Resolution 67
May not be **leeched**. Ignores "may not be **attacked**" effects on species with a **leeching** trait.

- Ignoring "may not be **attacked**" effects won't ignore other effects of defensive traits, such as [Defense] or effects triggered by the **attack**.
- A **leeching** trait is one that allows its species to **leech** and specifically uses the word "**leech**". Despite its name, *Cthulhu Leech* is not a **leeching** trait.

Poisonous Inking
Migrate 2 — Defensive — Defense 4 — Left + right arrows — Resolution 68
Adjacent species have [Defense 4].

- The adjacent species are considered to have a defensive trait for the purposes of **attacking**. An attacking species that can ignore a defensive trait can ignore the effect of a *Poisonous Inking* providing [Defense] to its target, even if the species with *Poisonous Inking* isn't the actual target.

- A species with *Hydra* can't take 1 population from the species adjacent to *Poisonous Inking*, even if those species don't have defensive traits of their own, unless it can ignore *Poisonous Inking* somehow.
- The adjacent species aren't considered to have a defensive trait for other effects. If *Poisonous Inking* is played while *Protective Growth* is active, only the species that actually **evolved** *Poisonous Inking* **gains 2**. The adjacent species don't **gain**.

Poisonous Spines
Migrate 1 — Resolution 69
After being **attacked**, the attacker and each other species that **gained** from the **attack** lose 3 population to the Reef.

- The effect of *Poisonous Spines* applies only once to a given species in a single **attack**. If the attacker also **gained** during the **attack**, it only loses 3 population to the Reef. If a species **gains** more than once from the **attack**, it only loses 3 population to the Reef.
- If the species with *Poisonous Spines* **gained** from being **attacked** (for example, with the *Regeneration* trait), it also loses 3 population to the Reef.
- Even though it's triggered by **attacks**, *Poisonous Spines* doesn't have a black text box, and it isn't a defensive trait. It can't be ignored by effects that ignore defensive traits.
- If *Poisonous Spines* causes multiple species to lose population to the Reef, and the order in which they lose population would matter, those species lose population in turn order, and each player can arrange the order their own species lose population to the Reef.
- If a species' trait would trigger from the **attack**, but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** from the **attack**. *Poisonous Spines* doesn't cause that species to lose population to the Reef.
- The effect of *Poisonous Spines* counts as losing population "due to an **attack**" for traits that care about that.
- *Poisonous Spines* is triggered by the **attack**, not by any **gains** that happen because of it. If a species with *Regeneration* **gains** from an **attack** on a species with *Poisonous Spines*, it loses 3 population to the Reef due to *Poisonous Spines*. Then, *Regeneration* **gains 1** again because it lost population due to an **attack**. This doesn't create an infinite loop, since *Poisonous Spines* is triggered by the **attack**, not by *Regeneration* triggering again.

Proliferation
Migrate 1 — Event — Resolution 110 — *Bundle #2*
Take up to 10 population from your score pile and add them to any number of species in play.

- Event cards are another kind of Deep card. They have one-time effects, and are then removed from the game. Like other Deep cards, event cards have a cost equal to their migrate number. The [rules section](#) has further details about how events work.
- The migrate number cost of *Proliferate* is not part of the population that you distribute among species. It still goes to your choice of either the Reef or the Ocean zone, just like paying the cost for any other Deep card.
- You have to distribute at least 1 population from your score pile. You can't choose to distribute 0 population, even if there were some possible reason you might want to. In other words, you need at least 2 population in your score pile to play this event.
- You may distribute the population from your score pile to any number of species. You can put it all on one species, or give 1 population to up to 10 species, or some other arrangement.

- You may put population on your opponents' species.
- You may use *Proliferate* to cause a species to overpopulate. Overpopulation won't be checked until you're done placing population on each species.

Rapid Mutation
Migrate 1 — Resolution 70
After being **attacked**, may swap a Deep trait on this species (including this trait) for a trait in the Gene Pool.

- You don't have to pay for the Deep trait that gets swapped onto the species.
- The trait that's swapped onto the species won't be triggered by the **attack** that triggered *Rapid Mutation*, since it wasn't on the species when the **attack** happened.
- Even though it's triggered by **attacks**, *Rapid Mutation* doesn't have a black text box, and it isn't a defensive trait. It can't be ignored by effects that ignore defensive traits.
- The trait that's swapped onto the species from the Gene Pool doesn't count as having been played on that species.
- If the trait that was swapped back to the Gene Pool still had triggers waiting to resolve, they won't resolve after that trait is swapped.
- If the Gene Pool contains only Deep events, and no Deep traits, you can't swap anything to or from the species with *Rapid Mutation*.

Regeneration
Migrate 1 — Gain 1 — Resolution 71
May have 1 extra trait. **Gains 1** after losing population due to an **attack**.

- Effects that count as losing population due to an **attack** include:
  - Being **attacked.**
  - Having population taken by *Hydra* during an **attack**.
  - Losing population due to an effect that triggers specifically from **attacking** or being **attacked**. An attacker can lose population due to its own **attack**.
  - Losing population due to an effect that triggers from another effect that's triggered due to the **attack**. In other words, any chain of triggers that started specifically from **attacking** or being **attacked**.
- Losses caused by overpopulation, scenarios, or insufficient species board space don't count as losing population due to an **attack**, even if an **attack** caused that species to have too much population or that scenario to be activated.
- If a species with *Regeneration* loses population due to its own **attack**, it **gains 1** after that.
- *Regeneration* triggers once for each effect that causes that species to lose population due to an **attack**.
- If the species with *Regeneration* also has *Poisonous Spines*, when it's **attacked**, it loses population to the **attack**, **gains 1** for *Regeneration* from the **attack**, loses 3 population to the Reef after **gaining**, and then **gains 1** for *Regeneration* again.
- The effect of *Poisonous Spines* counts as losing population due to an **attack**. If a species with *Regeneration* **gains** from an **attack** on a species with *Poisonous Spines*, it loses 3 population to the Reef due to *Poisonous Spines*. Then, *Regeneration* **gains 1**. This doesn't create an infinite loop, since *Poisonous Spines* is triggered by the **attack**, not by *Regeneration* triggering again.

- Triggers resolve in turn order. If *Regeneration* triggers while there are other triggers waiting to resolve, it may resolve before those earlier triggers if its controller comes earlier in the turn order.

Rows of Teeth
Migrate 1 — Attack 3 — Resolution 72
When **attacking**, *Bottom Feeders* and *Shark Cleaners* that **gain** take an additional population.

- The effect of *Rows of Teeth* also applies to the Deep versions of [Bottom Feeder](#) and [Shark Cleaner](#).
- The 1 extra population is taken at the same time as the **gain** from the same source as the **gain**.
- *Rows of Teeth* doesn't modify the actual **gain** value itself. Effects that modify the **gain** value directly, like [Communication](#), won't double the 2 extra population. For example, a species with Surface *Bottom Feeder*, *Endurance*, and *Communication* takes 5 population when an adjacent species is **attacked** by a species with *Rows of Teeth*. *Bottom Feeder*'s **gain 2** is doubled to **gain 4** by *Communication*, and then it takes 1 more population with *Rows of Teeth*.

Scavenger
Migrate 1 — Gain 1 — Resolution 73
Gains 1 after a species loses 2 or more population due to an **attack**.

- Effects that count as losing population due to an **attack** include:
  - Being **attacked.**
  - Having population taken by [Hydra](#) during an **attack**.
  - Losing population due to an effect that triggers specifically from **attacking** or being **attacked**. An attacker can lose population due to its own **attack**.
  - Losing population due to an effect that triggers from another effect that's triggered due to the **attack**. In other words, any chain of triggers that started specifically from **attacking** or being **attacked**.
- Losses caused by overpopulation, scenarios, or insufficient species board space don't count as losing population due to an **attack**, even if an **attack** caused that species to have too much population or that scenario to be activated.
- *Scavenger* triggers if a species loses 2 or more population at once from a single effect due to an **attack**. If a species loses 1 population from one effect and then 1 population from a second effect, *Scavenger* doesn't trigger, even if the second effect has the same trigger as the first or was triggered by the first.
- If the species with *Scavenger* loses 2 or more population due to an **attack**, it triggers its own *Scavenger* and **gains 2**.
- Triggers resolve in turn order. If *Scavenger* triggers while there are other triggers waiting to resolve, it may resolve before those earlier triggers if its controller comes earlier in the turn order.

Schooling
Migrate 2 — Defensive — Resolution 74
Aging +3. May not be **attacked** if this species has 5 or more population.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Schooling* increases its species' aging rate by +3 instead of just +1.

- The Deep version of *Schooling* does not count as a Surface trait, but it does count as a trait named *Schooling*. For example, a species with [Tail Whip](#) takes 1 population from a species with Deep *Schooling* before its feeding phase.

Sea Rex
Migrate 2 — May not forage — Attack 4 — Resolution 75
Aging +2

- There are currently no clarifications for *Sea Rex*.

Sea Wyrm
Migrate 4 — May not forage — Attack 11 — Resolution 76 — *Bundle #1*
Scores population from **attacks** that do not fit on the species board before overpopulating.

- The fishbones space on the species board is still counted when determining how much population can fit on *Sea Wyrm*'s species board.
- *Sea Wyrm* creates an exception to the rule that a species may not take more population than open spaces on its species board. The excess goes to your score pile instead. This only applies to population taken in **attacks**. When a *Sea Wyrm* **gains**, **leeches**, or takes population some other way, any excess won't be scored or taken.
- If a *Sea Wyrm* also has [Hydra](#), the population taken from other species is counted as being taken in the **attack**. Any excess can be scored.
- A species may not **attack** if it doesn't have at least 1 empty space on its species board. If a *Sea Wyrm* has a full species board, it can't **attack** at all, even if the population would end up someplace besides its species board.
- If a species with *Sea Wyrm* can't overpopulate, its effect still applies.

Sedentary Colony
Migrate 2 — Defensive — May not forage — May not attack — Left + right arrows — Resolution 77
May not be **attacked**. Takes 1 population from any Ocean zone when an adjacent species **gains**.

- *Sedentary Colony* only triggers when an adjacent species **gains**. If the effect doesn't use the word "**gain**", *Sedentary Colony* doesn't trigger.
- The adjacent species has to actually take population while **gaining** in order for *Sedentary Colony* to trigger. If a trait on an adjacent species would trigger but can't **gain** (most likely because it has no more room on its species board), then it doesn't **gain** and *Sedentary Colony* won't take any population.
- If a species with *Sedentary Colony* is **attacked** by a species that can ignore *Sedentary Colony*, the species with *Sedentary Colony* still takes 1 population if an adjacent species **gains** from that **attack**.

Shark Cleaner
Migrate 1 — Gain 3 — Resolution 78
After a species with [Attack 3] or more **attacks**, **gains 3** if this is the closest *Shark Cleaner* on either side.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Shark Cleaner* **gains** an additional population when it triggers.

- The Deep version of *Shark Cleaner* does not count as a Surface trait, but it does count as a trait named *Shark Cleaner*. When it triggers, it triggers traits like *[Acute Smell](#)*. When Surface *Shark Cleaners* check to see if they're the closest *Shark Cleaner* on either side of an attacker, they take the Deep *Shark Cleaner* into account.

Slow Metabolism
Migrate 1 — Resolution 79
May have 2 extra traits. May age 0.

- If you choose to have a species with *Slow Metabolism* age 0, it still counts as going through aging. Effects that care about aging, like *[Cthulhu Leech](#)*, still trigger.
- The effect of *Slow Metabolism* is all-or-nothing. You can't choose to partially age or to ignore some aging effects but not others. *Slow Metabolism* can't alter the aging from *[Gigantic Brain](#)*, so a species with *Slow Metabolism* and *Gigantic Brain* will always age population equal to the number of traits it has.
- A species with *Slow Metabolism* can also have *[Fast Metabolism](#)*. Such a species could essentially choose whether or not to age during any aging phase.

Sparkles
Migrate 2 — May not attack — Left + right arrows — Resolution 10 — *Kickstarter Promo*
When taking population, distribute it between this species and adjacent species.
Sharing is caring!

- When *Sparkles* takes population, you may distribute it any way you like between *Sparkles* and the adjacent species. For example, you may choose to put all of the taken population onto one or both adjacent species and none on *Sparkles*. (How generous!) You may also choose to put all of the taken population on *Sparkles* and none on the adjacent species. (How selfish!)
- *Sparkles*' effect only applies when *Sparkles* is doing the taking. If one of the species adjacent to *Sparkles* takes population, it won't be shared.
- If one of the adjacent species belongs to another player, you can still put population on it.
- *Sparkles* is still considered to be taking the population even if it ends up in a different place. *Sparkles* can still **forage** or **attack** as long as at least 1 population would be taken, even if *Sparkles* itself doesn't end up with any of that population. (Normally, *Sparkles* can't **attack**, but *[Bubble Net](#)* exists.) If *Sparkles* also has *Bubble Net* and *[Cavitation Bullet](#)*, it can't take more than 2 population from an **attack**, even if it keeps none of that population for itself.
- A species may not **forage** or **attack** if it doesn't have at least 1 empty space on its species board. If *Sparkles* has a full species board, it can't **forage** or **attack** at all, even if all of the population would end up someplace besides its species board.
- *Sparkles* doesn't lose the population that's shared with the adjacent species. It was never *Sparkles*' population to begin with. It just goes straight from wherever it came from to the adjacent species boards.
- *Sparkles*' effect still applies even if the action didn't use the specific verb "take". Any effect that would put population onto *Sparkles*' species board counts as *Sparkles* taking population. This includes **foraging**, **attacking**, **gaining**, **leeching**, the *[Proliferation](#)* event, or even a second *Sparkles* sharing with the first.
- If *Sparkles* shares taken population with adjacent species, those species aren't considered to have **foraged**, **attacked**, **gained**, **leeched**, and so on, even if that's how *Sparkles* initially took the population. If *Sparkles* **attacks** with *Bubble Net* and shares the population with an

adjacent species that has *Cavitation Bullet*, the species with *Cavitation Bullet* can take more than 2 population.

- If *Sparkles* takes population from one of the adjacent species (for example, by **leeching** or with *Bubble Net*), it may put it back onto that species as it takes it. Traits that care if population is lost still trigger, even though the taken population ends up back where it starts.
- Determine how *Sparkles* will divide up the taken population before checking for overpopulation or seeing what fits on its species board. For example, if *Sparkles* also has *Bubble Net* and *Sea Wyrm*, determine how much population *Sparkles* keeps for itself before determining how much population doesn't fit on its species board for the effect of *Sea Wyrm*.
- If *Sparkles* has a *Shark* or *Whale Cleaner* that **gains**, the relevant variety of *Impostor Cleaner* takes 1 population before *Sparkles* divides up the taken population.

Speed
Migrate 2 — Defensive — Forage 3 — Attack 3 — Defense 3 — Resolution 80
May have 1 extra trait.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Speed* has an additional point of [Forage], [Attack], and [Defense].
- The Deep version of *Speed* does not count as a Surface trait, but it does count as a trait named *Speed*. For example, a species with Deep *Speed* may **attack** a species with *Flight*.

Swarming
Migrate 1 — Attack ? — Resolution 81
Never overpopulates. [Attack +1] for each population.

- A species automatically gets [Attack 1] if its [Attack] would be less than 1. If a species has *Swarming*, no other traits with [Attack], and 0 population, its [Attack] is still increased to 1.

Symbiotic
Migrate 1 — Gain 1 — Left + right arrows — Resolution 82
Gains 1 when an adjacent species **forages** or **attacks**.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Symbiotic* is triggered by both adjacent species, not just one.
- The Deep version of *Symbiotic* does not count as a Surface trait, but it does count as a trait named *Symbiotic*. When it triggers, it will trigger traits like *Mutualism*.

Tail Whip
Migrate 1 — Resolution 83
Before your feeding phase, takes 1 population from each species with *Schooling*.

- *Tail Whip* counts the Deep version of *Schooling* as well as the Surface versions.
- If a species has multiple *Schooling* traits, *Tail Whip* only takes 1 population from it.
- Species can't take from themselves. If *Tail Whip* also has *Schooling*, it doesn't take population from itself.

Telomere Repair
Migrate 1 — Gain 2 — Resolution 84

Gains 2 before aging. Does not score during aging.

- A species with *Telomere Repair* doesn't score any population when it ages. It doesn't lose population at all when aging, either to its owner's score pile or anywhere else. It still counts as having gone through aging for effects that care about that, such as its first ability.
- A species with *Telomere Repair* doesn't lose any population during aging, so extinction isn't checked for it. It won't go extinct if it has less population than it otherwise would have aged. A species with *Telomere Repair* can still go extinct from other effects, such as overpopulating while *Epizootic* is active.
- If *Cthulhu Leech* is on a species with *Telomere Repair*, *Cthulhu Leech* still triggers before the species with *Telomere Repair* would age. The *Cthulhu Leech* effect and the *Telomere Repair* **gain 2** effect trigger at the same time, and they resolve in the usual order (turn order, then each player orders their own). The *Cthulhu Leech* trigger is controlled by the player who played it, not the player who owns the species it's on.
- The effect of *Telomere Repair* doesn't reduce how much population a species needs to age. It simply makes that amount irrelevant. If a species with *Telomere Repair* also has *Gigantic Brain*, it won't score any population during aging.
- A species with *Telomere Repair* can still score in other ways besides aging. Notably, *Telomere Repair* doesn't prevent the effect of *Fast Life Cycle* from scoring population, since *Fast Life Cycle*'s effect isn't aging.

Tentacle Leech
Migrate 1 — Resolution 85
Before your feeding phase, **leeches 2** from a species with a Deep trait.

- A species can't **leech** from itself. If *Tentacle Leech* is the only species in play with a Deep trait, nothing happens and nothing is **leeched**.
- If a species has multiple Deep traits, *Tentacle Leech* still only **leeches 2** from it.

Tentacled
Migrate 2 — Resolution 86
May feed 2 additional times.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Tentacled* allows a species to feed 2 additional times, not just 1.
- The Deep version of *Tentacled* does not count as a Surface trait.

The Kraken
Migrate 5 — May not forage — Attack 13 — Resolution 87
Ignores "may not be **attacked**" effects on species with at least [Forage 5] or [Attack 5]. May **attack** 2 additional times.

- *The Kraken*, on its own, doesn't allow the species to store extra population on its species board and it doesn't prevent overpopulation. You need other traits to get the full use of that [Attack 13].
- A species with *The Kraken* doesn't have to use all of its additional **attacks**. It may **attack** just 1 additional time if you want.

- Ignoring "may not be **attacked**" effects won't ignore other effects of defensive traits, such as [Defense] or effects triggered by the **attack**.
- Multiple "ignore" effects that affect the same event are checked simultaneously, before anything is ignored. If *The Kraken* has other traits that allow it to ignore defensive traits that provide [Attack] or [Forage], those traits' [Attack] and [Forage] are still taken into account when checking *The Kraken*'s effect.
- [May not attack] and [May not forage] icons don't change a species' [Attack] or [Forage]. A species that can't **attack** or **forage** still has at least [Attack 1] and [Forage 1]. It's possible for a species that can't **attack** or **forage** to still have an increased [Attack] or [Forage] from traits like *Speed* or [Megamouth](). These are still taken into account when checking *The Kraken*'s effect.

Tiny
Migrate 1 — Defensive — Resolution 88
May not be **attacked** by a species with [Attack 2] or greater. Discard this trait if its [Forage] or [Attack] is greater than 2.

- *Tiny* will be discarded immediately when its [Attack] or [Forage] becomes greater than 2, for any reason.
- *Tiny* isn't discarded if its species has a [Attack] or [Forage] of exactly 2, only greater than 2.
- Deep traits don't go to the discard pile. They're removed from the game instead. When *Tiny* is discarded, it's removed from the game.
- Copies of traits, like those created by [Mimicry]() or [Hybridization](), can never be discarded. If a species with a copy of *Tiny* ends up with [Attack] or [Forage] greater than 2, that copy of *Tiny* simply isn't discarded.

Transparent
Migrate 1 — Defensive — Resolution 89
May not be **attacked** or **leeched** if there is population in the Reef. Ignores "may not be **attacked**" effects on Deep traits.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Transparent* ignores "may not be **attacked**" effects on Deep traits.
- Ignoring "may not be **attacked**" effects won't ignore other effects of defensive traits, such as [Defense] or effects triggered by the **attack**.

Tusks
Migrate 1 — Defensive — Forage 2 — Attack 2 — Defense 5 — Resolution 90

- There are currently no clarifications for *Tusks*.

Vestigial Limb
Migrate 1 — Resolution 91
Play on another player's species. It counts as a trait and may not be removed. Play another trait after playing this one.

- *Vestigial Limb* does nothing to the species it's played on except use up a trait slot.

- *Vestigial Limb* can't be discarded, swapped, or otherwise removed from the species it's on. It is still discarded if that species goes extinct, and is still shuffled with other traits from the effects of *Radiation Blast*.
- After playing *Vestigial Limb*, play another trait. This isn't optional. This doesn't cost another action, though you still have to pay for Deep traits. You can't play an event or discard a card to **migrate**. If you somehow have no trait you can play, you simply do nothing else. The additional trait is played onto one of your own species, not the species you played *Vestigial Limb* onto.
- If the *Thermal Currents* scenario is active, you can play the additional trait from the Gene Pool.
- If you play the additional trait onto a species with *Abyss Dweller*, if it's a Deep trait, you don't have to pay for it.
- Swapping or copying a trait doesn't count as playing it. If *Vestigial Limb* is swapped onto a species or if a species gets a copy of *Vestigial Limb*, nobody will play another trait.
- A copy of *Vestigial Limb* still disappears if the trait that created the copy is removed; if it was created by *Mimicry* and the turn ends; or if it was created by *Hybridization* and the adjacent species loses the original *Vestigial Limb* somehow.

Voracious Feeder
Migrate 1 — Resolution 92
May feed in addition to your normal feeding turn if you have played another trait on it this turn.

- The extra feeding turn for *Voracious Feeder* lets you feed two species during your feeding phase. The extra feeding turn is optional. It takes place after your normal feeding turn is finished. It still takes place even if *Voracious Feeder* also fed during your normal feeding turn. If *Voracious Feeder* can feed additional times because of a trait like *Tentacled*, it can take additional extra feeding turns.
- A species that overpopulates from its own feeding turn can't feed again during that turn, but a species that overpopulates during another species' feeding turn (from **gains**, for example) can still feed later in that turn. If the species with *Voracious Feeder* overpopulated earlier in the turn from another species' feeding, it can still use *Voracious Feeder* to make another feeding.
- Playing *Voracious Feeder* itself doesn't satisfy its own condition. You have to play another trait on the species with *Voracious Feeder*.
- If you played another trait on this species this turn, but before it had *Voracious Feeder*, it still satisfies *Voracious Feeder*'s condition. It can take an extra feeding turn.
- If you played another trait on this species this turn, but it was removed before *Voracious Feeder* would take its extra feeding turn, it still satisfies *Voracious Feeder*'s condition. It can take an extra feeding turn.
- If your normal feeding turn is replaced with an effect like *Feeding Frenzy*, *Voracious Feeder* can still feed afterwards as long as another trait was played on it this turn. The extra feeding doesn't have to be the type specified by the effect that replaced your feeding turn. *Voracious Feeder* can take its extra feeding turn even if it also fed during the replaced feeding turn.
- Swapping or copying a trait doesn't count as playing it. If a species with *Voracious Feeder* has a trait swapped onto it or gets a copy of a trait, that won't allow it to take an extra feeding turn.

Warm-Blooded
Migrate 2 — Resolution 93
May have 1 extra trait. May age an additional 1-3 population.

- The aging ability of *Warm-Blooded* is optional. The species with *Warm-Blooded* still has to age at least its usual amount of population.

Whale Cleaner
Migrate 1 — Gain 4 — Resolution 94
After a species with at least [Forage 5] or more **forages**, **gains 4** if this is the closest *Whale Cleaner* on either side.

- Each Surface trait has a Deep version that's more powerful. The Deep version of *Whale Cleaner* **gains** an additional population when it triggers. However, it also requires that the forager has [Forage 5] instead of just [Forage 3] in order to trigger.
- The Deep version of *Whale Cleaner* does not count as a Surface trait, but it does count as a trait named *Whale Cleaner*. When Surface *Whale Cleaners* check to see if they're the closest *Whale Cleaner* on either side of a forager, they take the Deep *Whale Cleaner* into account, even if that Deep *Whale Cleaner* wasn't triggered by the **forage**.

Zooplankton
Migrate 1 — Defensive — May not forage — May not attack — Gain 3 — Left + right arrows — Resolution 95
May not be **attacked**. **Gains 3** after population is **migrated** to the Reef. Adjacent species may **forage** from this species board.

- *Zooplankton* **gains 3** after population is **migrated** to the Reef by any player. This includes discarding a card for its migrate number during your play cards phase. This also includes effects that specifically use the word "**migrate**", such as *Great Migration* and *Living Ecosystem*.
- **Foraging** from *Zooplankton* doesn't count as an **attack** even though population is being taken from a species board. It's just like any other **foraging** action, except the population is being taken from a different place. If *Zooplankton* has traits like *Whale Cleaner* or *Symbiotic* that trigger from **forages**, it can **gain** from being **foraged** on.
- If a species manages to ignore *Zooplankton*'s "may not be **attacked**" effect and **attack** it, that doesn't count as **foraging** from it.

SCENARIO CARD REFERENCE

Most scenarios have simple effects, but they might interact with Deep cards and other scenarios in unexpected ways. This section provides a card-by-card description of each Scenario card, including its full card text, icons, rules explanations, and some of its potential interactions. Descriptions of cards which aren't in the base game also mention which *promo set* they can be found in.

Abundance
Traits with **gains** get [Gain +1].

- This effect doesn't apply to traits that have a blue [Gain] icon but no **gains**, such as *Communication* or *Endurance*. The [Gain] value on *Communication* isn't changed to x3, and the [Gain] value on *Endurance* isn't changed to +3.
- The [Gain] increase from *Abundance* modifies **gain** values specifically, so it's doubled by *Communication*.

Aggressive Environment
Aggressive 3 — *Kickstarter Promo*
Species with 0 population may be **attacked**. They immediately go extinct before any traits trigger.

- This is an exception to the rule that a species may not **attack** unless it would take at least 1 population. The attacking species won't take any population from the target as part of its attack. It receives only the satisfaction of knowing that it has permanently removed a competitor from the ecosystem.
- "They" in the card text refers to the species being **attacked**, not the attacker. The species with 0 population goes extinct after being **attacked**.
- A species may not **attack** if it doesn't have at least 1 empty space on its species board, even if *Aggressive Environment* means it wouldn't take any population anyway.
- If *Aggressive Environment* is active, a species with [Extremophile](#) and 0 population can still be **attacked**, but it doesn't go extinct.
- The attacked species goes extinct before any of its own traits trigger. For example, if the attacked species had [Poisonous Spines](#), the attacker and other species that **gained** don't lose any population.
- The attacked species goes extinct before traits on other species trigger, but the **attack** still triggers those traits. Traits like Surface *Bottom Feeder* or [Burrower](#) that care about adjacent species being **attacked** still trigger.

Asteroid Impact
Event — Aggressive — Complex
Species without a Deep trait lose 3 population to the Reef.

- The population loss caused by *Asteroid Impact* does <u>not</u> count as losing population "due to an **attack**", even if *Asteroid Impact*'s Ocean zone was emptied because of an **attack**.

Biodiverse Reef
Species get [Forage 2].

- A species that has no traits with [Forage] while *Biodiverse Reef* is active has [Forage 2], not [Forage 3]. It doesn't get a "free" increase to 1 before the [Forage 2] from *Biodiverse Reef* is applied.

Contagious Outbreak
Aggressive — Complex
After a species overpopulates, adjacent species lose 3 population to the Reef.

- The effect of *Contagious Outbreak* is not overpopulation. A species that never overpopulates will still lose 3 population to the Reef if it's adjacent to a species that overpopulates.
- Even though *Contagious Outbreak* has a triggered effect, it's not an event scenario. Its effect occurs each time a species overpopulates, and resolves before scenarios are activated or deactivated.

Contagious Proximity
Complex

Species store 3 less population on their species boards.

- Effects that allow a species to store additional population, such as the *Prosperity* scenario or *Blubber* trait, stack with the effect of *Contagious Proximity*. For example, a species that has *Blubber* while *Contagious Proximity* is active can store 9 - 3 = 6 additional population.
- If *Contagious Proximity* is active, the fishbones space can still hold population. Species will overpopulate at 7 population instead of at 10 population.

Coral Bleaching
Kickstarter Promo
After your aging phase, place 2 population from the Reef onto any Ocean zone.

- "Your aging phase" refers to the aging phase of the player whose turn it is. The trigger will only trigger once per aging phase, even if an effect like *Uber Hostile Conditions* causes other players' species to also age during that phase.
- The player whose turn it is decides which Ocean zone the population from the Reef is moved to. If the *Solar Radiation* scenario is also active, the current player also chooses whether to move population from the Reef before or after the effect of *Solar Radiation*.
- The effect of *Coral Bleaching* doesn't count as **migration**.
- The 2 population moved from the Reef have to go to the same Ocean zone.
- If the Reef has only 1 population, just move the 1 population. If the Reef has 0 population, nothing happens.

Degenerative Virus
During aging, choose a species to age an additional time.

- You can choose any species that aged during this aging phase. If another player's species aged during your aging phase (for example, from the effects of *Fast Metabolism* or *Uber Hostile Conditions*), you can choose to make that species age again.
- Effects that trigger after a species ages, like *Fast Life Cycle* or an active *Schadenfreude* scenario, resolve before you choose a second species to age and before that species ages.
- Effects that trigger before or after a species ages, like *Cthulhu Leech*, *Telomere Repair*, or *Fast Life Cycle*, will trigger again if their species is chosen to age again.
- The effect of *Degenerative Virus* won't cause you to have a second aging phase. If the *Coral Bleaching* scenario is active, its effect will only happen once.

Detritus
Players place 2 population from their score pile into the Reef after a **migrate** action is taken.

- All players place 2 population from their score pile into the Reef, not just the active player who took the **migrate** action.
- Taking a **migrate** action refers to discarding a card during your play card phase to move population. The effects of *Great Migration* and *Living Ecosystem* won't trigger the effect of *Detritus*.
- Even though *Detritus* has a triggered effect, it's not an event scenario. Its effect occurs each time a **migrate** action is taken, and resolves after triggers on traits resolve, before overpopulation is checked, and before scenarios are activated or deactivated.

Epizootic
Complex 2
Species go extinct when they overpopulate. Place all population in the Reef.

- Scenario cards are activated after all triggered effects have resolved and after overpopulation is checked. When *Epizootic*'s Ocean zone is emptied, species won't go extinct if they overpopulate just before its effect becomes active.
- Overpopulation is checked after all players' traits are done resolving. Extinction won't happen until then.
- The population loss caused by *Epizootic* is considered to be overpopulation. If a species with *Draconic* overpopulates while *Epizootic* is active, it scores all of its population instead of losing it to the Reef, and then goes extinct.

Evolutionary Arms Race
Kickstarter Promo
Species may not **attack** a target whose [Attack] or [Forage] is greater than their own [Attack].

- If a species has an effect that allows it to ignore "may not be **attacked**" effects, that doesn't allow it to **attack** species with [Attack] or [Forage] greater than its own [Attack]. "May not **attack**" effects on the attacker are different from "may not be **attacked**" effects on the target.
- [May not attack] and [May not forage] icons don't change a species' [Attack] or [Forage]. A species that can't **attack** or **forage** still has at least [Attack 1] and [Forage 1]. It's possible for a species that can't **attack** or **forage** to still have an increased [Attack] or [Forage] from traits like *Speed* or *Megamouth*. These are taken into account when checking the effect of *Evolutionary Arms Race*.
- If the attacker has *Bubble Net*, it compares its own [Forage] to the target's [Attack] or [Forage] to see if it can **attack**. If the attacker is **attacking** a species with *Bubble Net*, it compares its own [Attack] to the target's [Forage] and disregards the *Bubble Net* species' [Attack] entirely.

Fertile
New species **gain 2**.

- Traits can't be triggered by themselves being played, or affect anything triggered by themselves being played. If a trait that modifies a species' **gains**, such as *Endurance* or *Communication*, is used to create a species while *Fertile* is active, those traits aren't active in time to modify the **gain 2** effect of *Fertile*. Those species still only **gain 2**.
- The **gain** from *Fertile* isn't from a trait. If the *Abundance* scenario is also active, the new species still only **gains 2**.

Food Surge
Event — Complex 2
Species double their population. Take from any Ocean zone.

- Overpopulation isn't checked and scenarios don't become active until all species have had their population doubled.
- Even though the species are taking from the Ocean, the effect of *Food Surge* is not a **gain**. Effects that modify **gains** or trigger based on **gains** won't apply.

- If the order in which species take from the Ocean would matter, species take in player turn order, then each player chooses the order their species take.

Genetic Diversity
The maximum number of traits per species is increased by one.

- Like with activations, Scenario cards are deactivated after all triggered effects have resolved. If *Genetic Diversity*'s Ocean zone is refilled, traits will trigger and resolve before players have to discard excess traits.
- If more than one trait has to be removed when *Genetic Diversity* becomes inactive, any consequences of losing those traits (such as losing extra population or extra traits) aren't checked until they're all removed. If one player's choices might influence the other players' choices of which traits to remove, players remove traits in turn order.

Horizontal Gene Transfer
Aggressive 2 — Complex 2 — *Kickstarter Promo*
Before your feeding phase, you may swap one of your traits with a trait on an adjacent species.

- You don't have to own the species that your species swaps with. You can make a swap with an opponent's species if you like. You can swap Surface or Deep traits.
- When determining the order for resolving effects, triggers from scenarios resolve after all the triggers from all players' traits have resolved. All traits that trigger before your feeding turn resolve before you make the swap with *Horizontal Gene Transfer*.
- If your species that participates in the swap has the *Nomadic* trait, that species can still only swap with the two species directly next to it. *Nomadic*'s effect only applies to traits, not scenario effects.
- Copies of traits created by traits like *Intelligence* can't be swapped. Only traits on actual cards can be swapped.
- It's possible to use *Horizontal Gene Transfer* to swap a trait on an opponent's species with a trait on one of your own species. If you do this, and the trait from the opponent's species has a "before your feeding turn" trigger, it triggers after it's been swapped onto your species. It's still before your feeding turn, and that trait's "before your feeding turn" trigger hasn't gone off yet.

Hostile Conditions
Aggressive 2 — Complex 2 — *Kickstarter Promo*
Aging occurs for the active player and the player to their right.

- During your aging phase, all of the species of the player on your right also age. This does not count as that player's aging phase.

Hostile Environment
Complex 4 — *Kickstarter Promo*
Aging +3

- There are currently no clarifications for *Hostile Environment*.

Inhospitable Environment
Complex — Aging +1

- The base game has three copies of *Inhospitable Environment*. Two copies have "Aging +1" and the third copy has "Aging +2". It's allowed for both scenario cards in a game to be *Inhospitable Environment*, although your playgroup may also choose to re-deal the scenario cards instead.

Large Predators
Aggressive
Species get [Attack 2].

- A species that has no traits with [Attack] while *Large Predators* is active has [Attack 2], not [Attack 3]. It doesn't get a "free" increase to 1 before the [Attack 2] from *Large Predators* is applied.

Lazy Creator
Event (maybe) — Complex 3 — *Kickstarter Promo*
Before the game, decide as a group what this card says.

- TODO: come back to this one later *(Editor: We apologize for the lazy reference guide writer. Basically, your group just makes up an effect for this scenario. Any kind of effect you want. It's up to you. If your group comes up with any good effects, let us know.)*

Long Haul Migration
Species may **forage** from any Ocean zone.

- *Long Haul Migration* doesn't prevent species from **foraging** from the Reef.
- The reserve bag is not an Ocean zone. *Long Haul Migration* doesn't allow species to **forage** from there. After the reserve tokens are placed into the Ocean, a species can **forage** from them while *Long Haul Migration* is active.
- If a species **foraging** from the Ocean causes the Ocean to become empty, the reserve tokens are immediately placed into the final Ocean zone. If the foraging species was unable to take its full **forage** value from the Ocean, it doesn't take the remainder from the reserve tokens.

Mass Migration
Event — Aggressive — *Kickstarter Promo*
Slide the leftmost species of each player to the opponent on their left.

- The species you shift to the opponent on your left becomes their rightmost species. They can't move it to another spot in their species line. Likewise, the species you receive from the opponent on your right becomes your rightmost species. You can't move it to another spot in your species line.
- If a player has no species, the opponent to their left receives nothing. The player who has no species receives one from the opponent on their right.
- If *Mass Migration* causes you to take a species with *Cthulhu Leech*, you don't gain control of the *Cthulhu Leech*'s effect. The player who originally played the *Cthulhu Leech* continues to score from it.

Paradigm Shift
Event — Aggressive — Complex
Species with the most population lose all population to the Reef.

- The effect of *Paradigm Shift* checks for the most population across all species, not just one player's species.
- If multiple species are tied for the most population, they all lose all their population to the Reef.

Parallel Universe
Complex 4 — *Kickstarter Promo*
On your turn, numbers on traits can be treated as 1 higher or 1 lower.

- The effect of *Parallel Universe* only applies to numbers on traits. It can't be used on the numbers of other scenarios, Deep events, the Cambrian Explosion reminder card, or the game rules. It can be used on the numbers of other players' traits during your own turn, not just your own traits. It can be used on traits in your hand to make Deep traits cheaper.
- Any number on a trait can be treated as 1 higher or 1 lower. This includes numbers in icons, numbers in trait text, migrate numbers, and resolution numbers. If a number has a noun associated with it, like "may have 1 extra trait", you can pretend that the noun also changes to singular or plural as necessary.
- If you choose to treat a number one way, you can still treat it a different way at a later point in your turn.
- The [Forage], [Attack], [Defense] values and aging rates on individual traits can be negative. If a species' <u>total</u> [Attack] or [Forage] would be less than 1, it's increased to 1. If a species' <u>total</u> [Defense] or aging rate would be negative, it's increased to 0.
- There aren't really many other rules for this card. This scenario is supposed to be pretty informal. Just do what makes sense. Have fun with it.

Pathogenic Immunity
Species never overpopulate.

- Scenario cards are activated after all triggered effects have resolved and after overpopulation is checked. When *Pathogenic Immunity*'s Ocean zone is emptied, there will still be one final check for overpopulation before its effect becomes active.
- Like with activations, Scenario cards are deactivated after all triggered effects have resolved. If *Pathogenic Immunity*'s Ocean zone is refilled, traits will trigger and resolve before *Pathogenic Immunity* becomes deactivated. After *Pathogenic Immunity* becomes deactivated, there will be another check for overpopulation.

Population Explosion
Event
Every [Gain] triggers.

- Each trait that has [Gain] and a **gain** trigger **gains** as if its trigger condition had been met. For example, each *Bottom Feeder* **gains 2** even if no species has been **attacked**.
- This effect doesn't apply to traits that have a [Gain] icon but no **gain** triggers, such as *Communication* or *Endurance*. Those effects still modify the other **gains** on that species.

- Some traits, like *Acute Smell*, trigger when other traits are triggered. These traits like *Acute Smell* also count the triggers caused by *Population Explosion*. For example, *Acute Smell* triggers once by the effect of *Population Explosion*, and then triggers again by *Population Explosion* triggering all the *Shark Cleaners*.
- After all the triggers from *Population Explosion* have resolved, there is another check for overpopulation. Then, if the **gains** have emptied out another scenario card's Ocean zone, that scenario will become active.

Prescient Mutations
Complex 2 — *Kickstarter Promo*
During the next player's turn, you may exchange 1 Surface card in your hand for 1 card in the discard pile.

- Only Surface cards go to the discard pile, so you can exchange 1 Surface card for another Surface card. Deep cards are removed from the game after they're discarded. Even if you put the removed Deep cards in a pile, that doesn't count as the discard pile.
- You can make the exchange at any point during the next player's turn. You can wait until they've discarded Surface cards during their draw phase to see if they've discarded anything you like.

Prosperity
Species may store 9 extra population on their species boards.

- Like with activations, scenario cards are deactivated after all species' triggered effects have resolved. If *Prosperity*'s Ocean zone is refilled, traits trigger and resolve before players have to deal with species' excess population. Overpopulation is checked before *Prosperity* is deactivated, and then again after it's deactivated.

Protective Growth
Species **gain 2** after they **evolve** a defensive trait.

- Traits can't be triggered by themselves being played, or affect anything triggered by themselves being played. The defensive trait that was just **evolved** isn't active by the time the *Protective Growth* trigger resolves. For example, *Communication* is a defensive trait that also doubles all **gains**. When a species **evolves** *Communication*, it still only **gains 2** from the *Protective Growth* trigger.
- When the *Protective Shells* scenario becomes active, it doesn't trigger *Protective Growth*.
- When a species **evolves** *Poisonous Inking*, only the species that actually **evolved** *Poisonous Inking* **gains 2**, even though its adjacent species benefit from it also.
- *Protective Growth* doesn't trigger if a defensive trait is swapped onto a species or if a species gets a copy of a defensive trait.

Protective Shells
Species get [Defense 2].

- The [Defense 2] provided by *Protective Shells* counts as a defensive trait when determining which species an attacker with *Hydra* can take from. If a species with *Hydra* can also ignore

defensive traits, then it can ignore the [Defense 2] from *Protective Shells* when determining which species it can take from.

Radiation Blast
Event — *Kickstarter Promo*
Players shuffle the traits on their species and play them randomly on their species one at a time.

- The easiest way to handle the effect of *Radiation Blast* is this: First, shuffle all the traits on all of your species together into a single pile, including traits like *Vestigial Limb* or *Cthulhu Leech* that otherwise can't be removed. Copies of traits will disappear, and won't be shuffled or redistributed. Species boards, with their population, stay in the same place and aren't rearranged.
- Then, deal out your traits from that pile onto your species one by one. You're not supposed to see what traits you're playing, so deal them all out face-down. You don't have to give a species the same number of traits it had before the *Radiation Blast*. You can deal more than 3 traits onto a species, and hope that one of the traits it ends up with allows it to have additional traits. You can give a species 0 traits.
- Traits remain face-down until all players have dealt out their traits. Then they're all turned face up. If a species ends up with more traits than it's allowed to have, immediately discard down to the allowed number of traits. If *Tiny* ends up on a species with more than [Attack 2] or [Forage 2], discard *Tiny* immediately. If a species now has more population on its board than its traits allow, it overpopulates immediately.
- The rearranged traits don't count as having been played or **evolved**. Effects that care about traits being played or **evolved**, like *Bioluminescence* or *Protective Growth*, won't trigger after *Radiation Blast* settles down.

Schadenfreude
Complex — *Kickstarter Promo*
When a species goes extinct, each other player's species **gain 1**.

- When determining the order for resolving effects, triggers from scenarios resolve after all the triggers from all players' traits have resolved. After all triggers from players' traits resolve, then species **gain 1**, in turn order, then each player chooses the order their species **gain 1**. This may in turn trigger other traits, like *Sedentary Colony*.
- Even though *Schadenfreude* has a triggered effect, it's not an event scenario. Its effect occurs each time a species goes extinct, and resolves before overpopulation is checked and before scenarios are activated or deactivated.
- Overpopulation is checked after all the *Schadenfreude* triggers resolve, and before any additional aging (such as from *Degenerative Virus*) occurs.

Shallow Gene Pool
Complex
The maximum number of traits per species is reduced by one.

- Scenario cards are activated after all triggered effects have resolved. If *Shallow Gene Pool*'s Ocean zone is emptied, traits will trigger and resolve before players have to discard excess traits.

- If more than one trait has to be removed when *Shallow Gene Pool* becomes active, any consequences of losing those traits (such as losing extra population or extra traits) aren't checked until they're all removed. If one player's choices might influence the other players' choices of which traits to remove, players remove traits in turn order.

Shallow Reef
Kickstarter Promo
Species lose 2 population to the Reef after **foraging**.

- A species can still **forage** from the Reef even if all of the population it takes would be lost back to the Reef afterwards.
- When determining the order for resolving effects, triggers from scenarios resolve after all the triggers from all players' traits have resolved. A species with *Ambush* takes 2 population from a forager before the forager loses population due to *Shallow Reef*.
- Even though *Shallow Reef* has a triggered effect, it's not an event scenario. Its effect occurs each time a species **forages** from the Reef, and resolves before overpopulation is checked and before scenarios are activated or deactivated.

Snowball Earth
Complex — *Kickstarter Promo*
The [Attack] and [Forage] of every trait is reduced by 1.

- This doesn't affect the [Attack] or [Forage] from scenarios like *Biodiverse Reef* or *Large Predators*. It only affects [Attack] and [Forage] on traits.
- The [Attack -1] effect of *Snowball Earth* applies before the [Attack] is doubled by *Pack Hunting*.
- Individual trait cards can have [Attack] or [Forage] that are 0 or even negative. For example, if a species has *Swarming* and 0 population while *Snowball Earth* is active, *Swarming* has [Attack - 1]. However, a species' total [Attack] or [Forage] can never be below 1. If it would be below 1, it's increased to 1 instead.
- *Deep Diver* gets [Forage +2] for each Deep trait it has. *Snowball Earth* applies to the total [Forage] on *Deep Diver*, not the cumulative [Forage +2]. If *Snowball Earth* is active, *Deep Diver* on a species with 2 other Deep traits (3 Deep traits total) has [Forage 5].

Solar Radiation
Complex 2
After each aging phase, species without a Deep trait lose 1 population to the Reef.

- After each aging phase, all species without a Deep trait lose 1 population to the Reef, not just the ones owned by the player whose turn it is. This doesn't count as aging. If a species doesn't have any population to lose to the Reef, it doesn't go extinct.
- If the *Coral Bleaching* scenario is also active, the player whose turn it is can choose whether the effect of *Coral Bleaching* occurs before or after species without a Deep trait lose 1 population to the Reef.

Thermal Currents
Complex
On your turn, you may **evolve** traits directly from the Gene Pool.

- You can't play Deep events from the Gene Pool, only Deep traits. If all face-up cards in the Gene Pool are events, you can't play from the Gene Pool.

Uber Hostile Environment
Aggressive 3 — Complex 3 — *Kickstarter Promo*
Aging happens to every species in play.

- This means that during each player's aging phase, all species age, not just the ones belonging to the active player.
- A player's aging phase is the one that occurs during their own turn. Effects that care about "your aging phase" won't trigger if your species age during someone else's turn.

NEW RULES REFERENCE

This section describes the rules for new game mechanics that don't appear in the base game, such as Deep Event cards and traits that copy other traits.

Event Cards

The rules for event cards were included with the special insert for Kickstarter backers. However, if you don't have the Kickstarter insert, the rules for event cards are included here.
- Event cards are another kind of Deep card. Events have a purple textbox and a lightning-bolt-shaped event icon like the one on some Scenario cards. Instead of being played as traits, they have one-time effects.
- Like Deep traits, playing an event requires paying a cost equal to its migrate number. Before playing the event, move population equal to the migrate number from your score pile to one location: the Reef or any Ocean board. After being played, event cards are removed from the game instead of put into the discard pile.
- Most event cards are played during your play cards phase as an action, just like Deep traits. A few events, like *Bioluminescent Lure*, are played at other times, which will be described in their rules text.

Copying Traits

A few promo Deep traits have an effect saying that a species "has a copy" of another trait: *Hybridization*, *Intelligence*, and *Mimicry*. Having a copy of a trait allows a species to benefit from having a trait, but without needing an actual card for that trait.
- When an effect says a species has a copy of another trait, it's not necessary to find an actual copy of that specific card to add it to that species. Just pretend it has a printed copy of that trait next to its species board.
- A copy of a trait is just like the original card, and has everything printed on the original card: the trait's name, rules text, **attack/forage/gain** icons, text box color, adjacency arrows, migrate number, resolution number, whether it's a Deep or Surface trait, and anything else that might be relevant.
- Copies of traits only copy what's printed on the original trait. If the original trait has been modified by other effects, those modifications won't be copied. Modifications can still apply to the copy itself after it's created.
  - For example, consider a species with *Intelligence* that copies a *Bottom Feeder* while *Abundance* is active. Because of *Abundance*, the original *Bottom Feeder*'s **gain** is increased to **gain 3**. However, the copy will only have the *Bottom Feeder*'s printed **gain**

2, which will then be increased to **gain 3** because of *Abundance*. It won't copy the original's increased **gain 3** and then have it increased again to **gain 4**.

- Copies of traits don't count towards a species' trait limit. Copies of traits are still counted in other situations.
  - For example, a species with *Gigantic Brain* still counts copies of traits when determining how much population it ages.
- Copies of traits can never be discarded, swapped, or otherwise removed from the species they're on. Copies of traits can also never be copied themselves. (That is, you can't have a copy of a copy of a trait. The original trait can still be copied by another effect.) Only traits on actual printed cards can be removed or copied.
- If a trait that can create copies of other traits is removed from a species, any copies of traits that it created also disappear at the same time.
- When a species creates a copy of a trait, that trait isn't considered to have been played on that species. The copy just begins to exist.

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