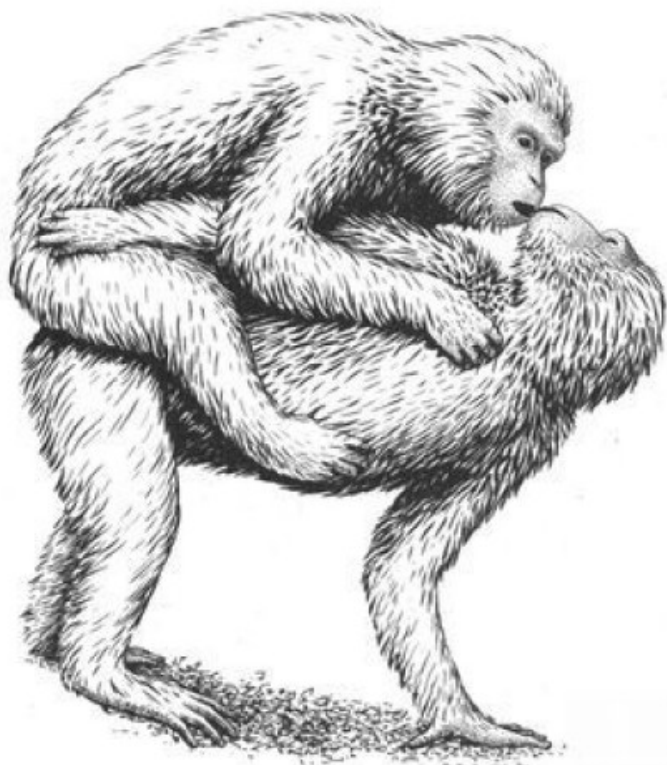


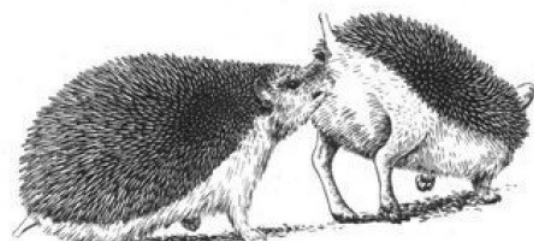
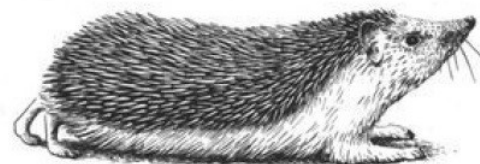
Queer zoology



3 articles published in French on the site
<https://contrepoints.media/projects/bestiaire>

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“We’re Deer. We’re Queer. Get Used to It. A new exhibit in Norway outs the animal kingdom.”

-Alisa Opar

Queer Bestiary

What we imagine about animals' sexuality is vast and contradictory. From the vulgar bestiality that is vaguely attributed to all wild animals to the glorified monogamy of emperor penguins, so much has been said, repeated and contradicted.

Much of what follows is only a translation of excerpts from *Biological Exuberance*. In it, the author very coldly and scientifically describes sexual behavior with the purpose of making visible a hitherto hidden aspect of these sexualities. Note that these excerpts describe scenes of affection, of seduction, of family organization, but also sexual violence.

CW : Sexual violence.

-The unicellular protozoan *Tetrahymena thermophila* has seven different sexes and can reproduce in 21 combinations.

- « Male botos [freshwater dolphins living in the Amazon] are involved in a large variety of homosexual interactions, including copulations during which three different types of penetration take place: a male can insert his erect penis into the genital slit of a companion, in his anus or his blowhole. They can also rub their openings or their sexes against each other. Male couples who interact sexually show great affection for each other, caressing each other with their beak or fins, constantly brushing against each other, swimming side by side and always keeping physical contact, going to breathe on the surface simultaneously, or playing and resting together. A male boto was spotted delicately taking the entire head of a tucuxi [another species of dolphin] in his mouth in an apparently affectionate gesture. »

- « For lionesses, homosexual interactions are often initiated by a lioness pursing another and then wriggling underneath her and encouraging her to mount her. Certain behaviour also associated with heterosexual copulation then takes place, including gently biting the neck of the individual below, grunting, moving back and forth and rolling on the back when it is over. Sometimes the lionesses alternate in mounting. »

- [Roughgarden argues that] white-throated buntings have "four genders, two male and two female". These genera are distinguished by the presence of a white or reddish-brown stripe-corresponding respectively to more aggressive and territorial or to more accommodating behaviour. In terms of sexuality, it turns out that 90% of the mating

involves a white-banded bird and a brownish-red banded bird, no matter what gender. »

- Only a fraction of red foxes reproduce - at least a third of the females (depending on the population) does not reproduce and in some places this is the case for up to 95% of female foxes. Several mechanisms produce this "birth control". Some foxes simply do not mate, or not with males, or do not enter into heat. In other cases, the foxes get pregnant, but regularly abort or abandon their young once they are born. »

- « Juvenile black bears and grizzly bears (sexually immature) are also involved in sexual activity between each other, including mounting and licking each other's vulva. »

- Female spotted hyenas have an extraordinary genital configuration that makes them almost indistinguishable from males: their clitoris is on average 90% of the length of the penis of males (nearly seven inches long) and equal in diameter; it can be in full erection. In addition, the lips are fused and look like a "scrotum" containing fat and connective tissue that could be testicles. There is no vaginal opening, instead of which females copulate and give birth (and urinate) through the end of their clitoris. Heterosexual mating is accomplished by retracting the clitoris inside of the abdomen, turning it almost upside down to form the passage inside of which the male will be able to insert his penis. Females have also been observed mounting others, their clitoris in erection. Clitoral penetration may also occur, although this is not common. »

- At least 10% of roe-deer are intersexed.

- « Homosexual interactions in female big-eared hedgehogs involve a lot of seduction and affectionate behavior in addition to direct sexual experiences, frequently consisting of oral sex. A typical lesbian interaction begins, often at dusk, with two females rubbing against each other, sliding against their partner's body and cuddling. A female can also crawl directly underneath the other, sliding from her neck to her belly. During sexual contact females intensively lick, smell and chew on each other's genitals. Sometimes, to have a better access, a female will lift the hindquarters of the other one in the air with her paws and jaw, completely lifting the hindpaws of her partner from the ground while continuing to lick her. »

- « There is lesbian parenting in snow geese. Female couples have a very powerful relationship: when one of them is away from her partner, the other starts calling her loudly until she comes back. The couple builds a single nest in which each female lays eggs. The two birds take turns brooding the eggs (in straight couples, males do not brood). Since some females in these relations sometimes copulate with males, some of the eggs are fertile. When they hatch, the two geese raise the goslings and defend them against intruders and predators by standing above them with their wings as cover.

There is no written record of male homosexual snow geese couples, although relationships have sometimes been observed developing between male snow geese and a male Canada goose. The two birds become stable companions, following and roosting close to each other, although nest building and copulation usually do not take place. Either way, male snow geese sometimes mount each other when they participate in "gang rapes". In this species, one often observes males sexually harassing females, chasing them, and forcing copulation. In some cases, other males congregate in large "spectator" groups - sometimes containing 20 to 80 males - to observe and perhaps join in the acts. Sometimes males may mount each other in the ensuing sexual activities. »

- « Some male black swans form stable, long-lasting homosexual couples. As with heterosexual couples, homosexual partners often stay together several years. Often the two males perform the "Salute Ceremony", a performance demonstrating the seriousness of a relationship and helping to solidify and strengthen their association: the birds face each other, raise their wings (sometimes waving them to expose their white feathers) and shout several times, their neck extended and their beak held high. Males forming homosexual couples also take part in a seduction parade known as "head immersion". In this performance - a prelude to copulation - both birds repeatedly plunge their heads and then their necks, then finally their whole body in the water, making waves for long periods of time, sometimes 20 to 25 minutes. This parade can lead to sexual interaction, but if one of the males does not want to participate, he can respond aggressively to his partner's attempts. »

- « "Roughgarden explains that most Canadian bighorns live in "homosexual societies", courting and copulating with other males via anal penetration. It is the non-homosexual males that are considered "aberrant": "The few males who do not participate in homosexual activities have been labeled "effeminate" males... They differ from "normal males" in that they live with the ewes rather than joining a group of rams. These males do not dominate the females, are generally less dominant than the females and adopt the crouching posture of females for urination. These males refuse to be ridden by other males." »

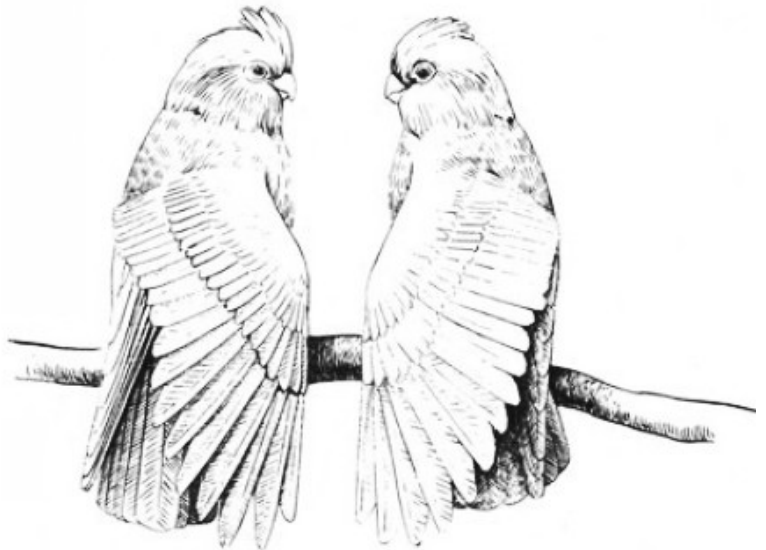
- Several species of lizards reproduce asexually, by parthenogenesis. The discovery was first made by scientists who found no males in some isolated populations of lizards. We can now count several species of lizards composed only of females, including the gecko *Lepidodactylus lugubris*. Cases of parthenogenesis have been observed in several species of insects, reptiles, amphibians, fish and birds: snakes, sharks, turkeys, komodo dragons and several others still, some in captivity, others free.

- « Of all the animals capable of changing sex, fish are the best known. [...] All clownfish are born male. The most dominant male of the group will become a female. There is only one female per group. If she dies, it's usually the largest male who will change sex and take her place. Wrasses do the opposite. Their groups consist of

several females and one male. How it all works is still mysterious, but the process seems to consist of a massive change of hormone levels and the transformation of testicles into ovaries. The labia can complete its transformation in as little as a week. While it was long believed that this characteristic was rare, sex changes have now been observed in several dozen fish families. »

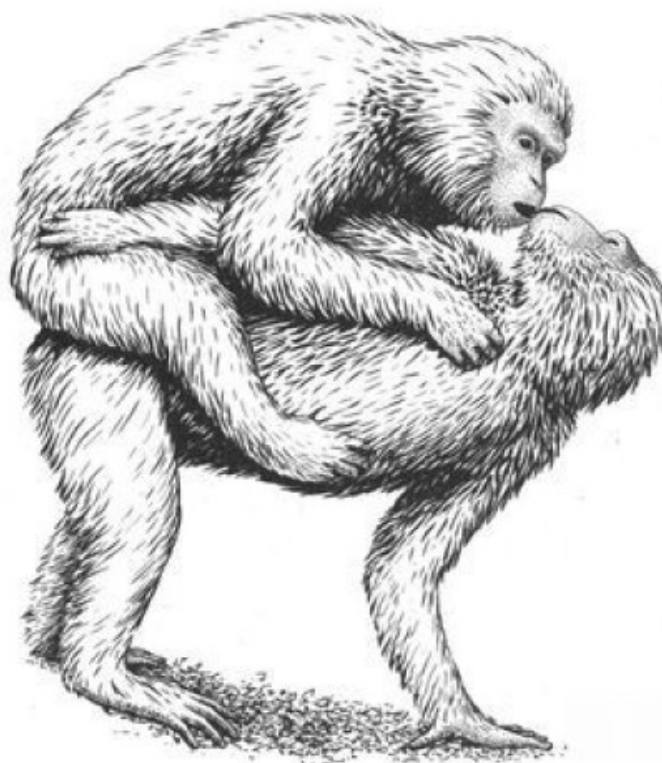
This list of examples of sexual characteristics or behaviors is just the tip of the subject of what animal sexualities look like. This first article was intended to be accessible and simply sought to broaden our horizons as to the diversity of being and sexual practices that can be observed in other animals. Some animals have many sexual partners, others only one. Sometimes they are partners of a certain sex, or another, or even another, or of several of them. Some animals are intersexed, others change sex during their life. Some reproduce sexually, others asexually, others have sex without reproducing, others do not have sex and do not reproduce. Some do long and many parades before copulating, others not, for others sexuality is often violent. Some prefer oral sex. In some groups, sexuality is very socially important, for others not. Etc.

I come out deeply exhausted from the research done to write this article. On the one hand, it is the scientific language itself that emotionally exhausts me. Indifference, the extraction of oneself which claims to be objectivity, the scrutinizing glance. On the other hand, the methods often involve a large dose of violence made invisible in the description of results. I have read the enthusiasm of some revealing the results of their dissection of an intersexed shark mistakenly caught in a net. Pictures of hunters posing with the corpse of a deer with its legs open for the same reason. The capture of hundreds of baby snakes to prove parthenogenesis. The capture, intoxication, the cold handling of so many others, sometimes to release them with an electronic device on their foot or a chip under the skin, sometimes to keep them in captivity until their usefulness has run out and they are executed. Not to mention the ridiculous experiments that are carried out sometimes involving the insertion



of objects into the skulls of some, or the mutilation of certain parts of the body. And even when the experiments are not as grossly violent, they are still terrible.

Let me conclude by sharing this example with you. It is an experiment in which a female molly is isolated in an aquarium and is shown videos of a small male that is sexually active towards a large, rather passive male. In the aquarium there are pictures of the little male and the big male. After the videos, the female starts to stand closer of the photo of the little male. The results are immediately picked up by many news sites with the worst titles in the world: "Fish Go Gay To Improve Odds Of Mating" oor "Male Fish Uses Bisexuality to Lure Females" or "Male Atlantic Molly Fish Engage in Homosexual Acts to Attract Females". The results of this experiment were victoriously taken up publicly, and I believe it is because they "solve" the enigma of animal homosexuality in a way that reinforces the dominant simplistic heterosexist discourse on evolution. But this is discussed again in the third article in this series.



The heterosexism of zoology

"Animals don't do it, so why should we? Can you even imagine a queer grizzly bear? Or a lesbian salmon or owl?" excerpt from a letter sent to Dean Hamer, co-author of *The Science of Desire: The Search for the Gay Gene and the Biology of Behavior*.

For some time now, revelations have been pouring in about how many animals are queers. I use this term in an overly general way to speak of the vast diversity of emotional, sexual, seductive or sexual characteristics and behaviors, or family organizations that defy the norms of their own kind, or of heterosexuality that a certain understanding of evolution would deem absolute.

The starting point for this article is a question: Where were the scientists during all those years when it was tirelessly repeated that homosexuality was not natural and therefore a nameless horror?

Many have countered this argument by objecting that the "Natural = good, not natural = bad" logic was simply false and absurd. It took a lot of time, however, for voices to also say "besides, lots of animals are gay". Indeed, as we now know, homosexual behaviour is ubiquitous in a wide range of insect, bird, mammal, reptile, fish and amphibian species. Any human being studying their behaviour will eventually come across these kinds of interaction. But the scientists kept quiet. Why? Because they thought "the sexual behaviour of animals is as cultural as ours and therefore does not refute the assertion" ? I unfortunately do not believe so. Neither does Joan Roughgarden, the author of *Evolution's Rainbow*. She believes that "scientific silence on homosexuality in animals is tantamount to concealment, whether deliberate or not". This is what we will study in this article, particularly in examples 3, 4 and 5. Let's start with two examples that will remind us that science is neither taught nor practiced in a social world separate from the rest. Scientists, like judges for that matter, are human beings who carry over into their work a system of beliefs, ideologies, norms and values that are more often than not consistent with the beliefs, ideologies, norms and values of their time. In the situation we are interested in, it can be, as in example no.1, overt homophobia, just as it can be, as in example no. 2, rampant heterosexism that cannot be thwarted by good intentions.

Example No. 1 - Notes on the apparent decline in moral standards in lepidoptera: "It is a sad reflection of our times to see the national newspapers far too often filled with the sordid details of declining moral standards and horrifying sexual offenses committed by our fellow homo sapiens; Perhaps it is not surprising that the entomological literature offers us a similar reflection by rushing in the same direction. [...] I was recently in Morocco and spent some time around Oukaimeden in the High Atlas Mountains south of Marrakech. On June 11, 1986, I got the chance to come across a vigorous colony of *Cyaniris semiargus maroccana* butterflies barely emerging from their cocoons in tall grass at about 2600 meters of altitude. After taking a few pictures,

I observed a group of four males flying around what I assumed to be a female freshly emerged from her cocoon, sitting close to the ground with its wings closed. Seeking to photograph the copulation of a pair, I waited to see which of the contenders would be the winner, but I quickly realized that the object of their attention and affection was also a male. The males fought each other and each one bent down his abdomen in a frantic attempt to make contact with the abdomen of the young male.

[...]

The situation became even stranger when a fresh female came to land with its wings open on a blade of grass less than a foot away. One of the four males approached, she immediately lifted her abdomen and vibrated her wings, but after a very cursory examination, the male returned to the group and continued to take an interest in his young companion. During the next hour, I saw three other groups of males, one of them containing eight individuals, get together and act similarly towards fresh males whose wings were not yet fully dry. [...]

To appease the reader's mind, I must also report having subsequently observed a number of "normal" couple copulations; at least some individuals have the future of the colony in mind. »

By W. J. Tennent, 1987.

This example is an interesting case because it is relatively recent and seems so crude. I find it important to share it here in order to not forget: this exists. This homophobia is not at all representative of the norm in the entomological literature community, as the author notes in the first lines, but it exists. This example also raises the question: can we morally judge the behaviour of animals now that their cultural existence is recognized? It is one thing that we do not share the author's anger towards these individuals that flout "natural laws" (meaning heterosexuality) and so jeopardize "the future of the colony", but what of the fact that these males attempt to interact sexually with a young male "fresh out of the cocoon", the wings of which, being "not yet dry", do not allow it to escape? Do we think nothing of it?

In contrast to the first, the second example involves scientists with good intentions and a clear open-mindedness towards homosexuality. It will allow us to observe what scientists are facing as they stop keeping quiet on the question we are interested in and to see how, despite themselves, they participate to the marginalization of homosexual couples.

Example no. 2 - Lesbian seagulls: In 1972, George and Molly Hunt did a field study on the behaviour of gulls on a small island near Santa Barbara in California with a group of students. The discovery of one, then several monogamous lesbian gull couples, nesting and raising their offspring together shook the United States. They published their results in 1977: 14% of the female gulls on this island are paired with other females. The response of a part of the society is brutal; "The \$\$ of your taxes wasted studying lesbian seagulls" reads a newspaper article headline; "When Russia attacks, we won't have any B-1 bombers to defend ourselves but we will be able to

mobilize our gay gulls, put Bella Abzug in charge and launch our great counter-attack", expresses a merchant angry enough to buy ad space in a newspaper to say what he thinks about it; "100% of gulls in the five boroughs of New York City are heterosexual," says a group of citizens.

George Hunt will continue the research against all odds, dismissing the complaints of conservatives. But to research what? The causes of this homosexuality. Indeed, he will first consider that this great occurrence of lesbianism is probably the consequence of serious environmental imbalances. He will not find anything conclusive and eventually we learn that gull populations which include a significant percentage of lesbians can be found in many parts of the world. "The world is full of lesbian seagulls".

(Note that according to the scientist, the percentage given in 1977 has gone down rapidly in the 1990s and that there are far fewer lesbian pairs of seagulls on this island today).

The idea that the occurrence of homosexual practices in animals is an anomaly and must be attributed to some unknown environmental problem is not new. It is a variation of the statement that "homosexuality is not natural". At the beginning of the 20th century, it was said that human homosexuality is an urban phenomenon caused by pollution. In the same vein, some scientists will also attribute what they called the "effeminization" of bald eagles to pollution. In a chapter of *Queer Ecologies*, Di Chiro focuses specifically on situations of this type, denouncing several influential activists who oppose the accumulation of chemicals in the environment because of its alleged influence on divergent genders, organs and sexualities rather than the serious health problems, such as cancers of ovaries and testicles, immune system collapse, diabetes and heart diseases that these chemicals cause. If these two examples allow us to find certain elements of the answer to the main question of this article, the following will fill in the grey areas. In the first chapters of his book, Bagemihl deconstructs various elements that contributed to scientists' silence on the question of homosexuality. He writes: "The discussions surrounding animal homosexuality have in fact been compromised, even smothered in scientific discourse through these four processes: presumption of heterosexuality, terminological denial of homosexual activity, inadequate or inconsistent coverage of the phenomenon and the omission or deletion of information. »

Example no. 3 - The presumption of heterosexuality: "After about twenty minutes, I realized that what I was observing was actually three whales engaged in the most erotic behaviour! [...] Then, one, two and eventually three penises appeared while the three whales were turning at the same time. Obviously, all three were males! It was almost two hours after we had spotted them [...] and up to that point I was convinced that I was observing mating behaviour. A discovery - and a brutal reminder - that first impressions are often misleading. »

James Darling, "The Vancouver Island Gray Whales," 1977.

Example No. 4 - Terminological denial of homosexual activity: "I still twitch when thinking of the memories of the old goat-D repeatedly mounting goat-S [...] I called the goats' activities agrosexual behaviours, because to affirm that these males had evolved until they formed a homosexual society was emotionally beyond my strength. To conceive of these magnificent beasts as queers - My God!"

Biologist Valerius Geist, quoted in Bagemihl 1999, p.107

The terms used by many scientists to report on homosexual activity eloquently demonstrate their prejudice. Thus, "male walruses engage in "mimics of courtship" between themselves, African elephants and male gorillas practice "mock mating", while female grouse and male langurs and chimpanzees participate in "pseudo-copulation". In the same vein, muskox "simulate copulation", mallards of the same sex form "pseudo-couples" and blue-bellied rollers engage in "false" sexual activities. Male lions "fake" coitus with each other, male orangutans and baboons mount each other "pseudo-sexually", while mule deer and hammerhead sharks "falsely mount each other". Bonobos, macaques, red foxes and squirrels all participate in "pseudo-copulations" with animals of the same sex. »

Example No. 5 - Inadequate or inconsistent coverage of the phenomenon and the omission or deletion of information: "I spoke with several primatologists (anonymously following their demand) who told me that they had observed homosexual behaviour, both in males and females, during their field work. They seemed reluctant to publish their data, either because they feared homophobic reactions ("my colleagues might think I'm gay"), or because of the inadequacy of their analytical framework for integrating such data ("I don't know what it means")."

Primatologist Linda Wolfe, 1991.

How many homosexual fornications have been observed without being acknowledged? How many times have we presumed to be witnessing heterosexuality incarnate in front of our eyes when this was not at all the case? How many scientists didn't want to recognize something that would complicate everything, was incomprehensible, or did not fit their theory? How many studies on the sexuality of this or that species have narrowed their scope of analysis to reproductive activities only? How many scientists have trivialized the sex they observed: "He mistook his companion for a female"? How many observations were concealed because they were embarrassing? How many others were "forgotten" so as to avoid repercussions from a homophobic society? How many scientists lacked courage?

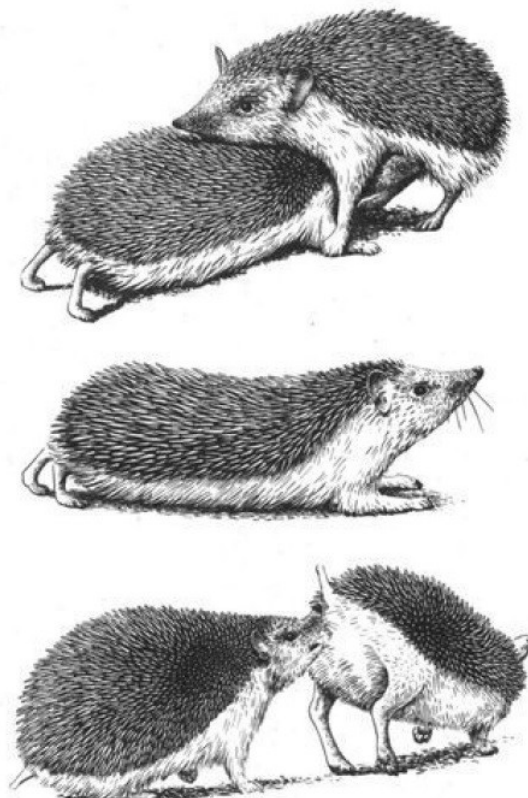
Tons.

It goes without saying that these few examples are only the tip of the iceberg of the tendency that helped invisibilize non-heterosexual and non-reproductive sexual, seductive or familial activity in zoological studies. Systemic heterosexism runs

through the history of zoology and implicates a great deal of scientists. These scientists were, of course, permeable to dominant social discourses and the knowledge they produced was, of course, also the product of a social context.

In short, here we have a lot of material explaining how things as obvious as animals' homosexual behaviour were denied and invisibilized for so long despite the astronomical number of occurrences. This situation can be used as an example to understand how ideological pressure can actively restrict descriptions of reality and, by doing so, mold an illusory reality absent of disturbing elements, queers.

The enthusiasm expressed in the introduction to the bestiary project is due, among other things, to this: the dam has given way and we are now overwhelmed by all the observations made, yet silenced for so long. The illusion has faded and we must now determine how dangerous for the established order these disturbing invisibilized elements are. To be continued.



Parenthesis - Darwin

Synthesis of "Enemy of the Species" by Ladelle McWhorter

Today, I wanted to write the article Queer Zoology 3 of 4, but I got caught up in the paraphrase-translation of an article by Ladelle McWhorter that addresses very important questions and which puts into context certain aspects of Darwinism that will be very important for us. Let's look at it as a detour and we will continue this series of articles very soon with an analysis of the "Darwinian paradox" of animal homosexuality.

Did you know that the concept of species has a particularly terrible history? Ladelle McWhorter explores this issue in *Enemy of the Species*, a text from the book *Queer Ecologies*. This article is an attempt to render accessible the information and reflections contained in that text. Between 1749 and 1788, the Count of Buffon tried to synthesize all the knowledge of the sciences of nature - general and particular - in the 36 volumes of his *Natural History*. Although he rejects the method of species classification, believing it more accurate to highlight the many slight variations not only between species, but also between individuals, Buffon nevertheless gives a definition of the term species that has persisted. His own observations led him to describe a species as a group of individuals who can produce fertile offspring. This definition, detailed and later enhanced with genetic knowledge, is still taught today. McWhorter, however, tells us that the term and its definition have always been and continue to be controversial.

In the 1830s and 40s, opposition to slavery in the United States spread to different layers of society. Biblical and economic arguments no longer seemed to hold the weight necessary to defend this institution. Scientists are then thrown into the scrum, bringing along their theoretical and rational "scientific" weight. The argument on which they rely is the following: Caucasians, indigenous peoples and black Africans are simply not part of the same species (and thus obviously should not have the same rights). This idea is called polygenism. The validity of this argument rests largely on the above definition given to the term species.

One of the greatest defenders of polygenism, Joshua Nott, sometimes argued that species are simply groups of living beings that are distinguished by their morphological features. He then relied on the prestigious work of world-renowned anatomist Samuel G. Morton, who had studied the cranial differences between Black Africans and Caucasians, to determine that they belong to different species. He will go so far as to conclude that they "do not descend from the same original strain". A naturalist named Bachman, supporting the idea of monogenism (that all of mankind forms a single species), responded with a long definition that included the idea put forward a century earlier by Buffon that a species is defined by the ability of its

members to give fertile offspring. Let us note that at that time many individuals with parents with different skin colors were living in the United States.

In 1843, Joshua Nott would go on to detail how his own experiments as a doctor (for rich masters and their slaves) led him to "observe" that what he called "mulattoes" are less healthy, live less long and are less fertile than their parents, especially women, and that after three or four generations, the descendants are completely infertile. Obviously this is not true. But he was believed.

Morton, who had not yet chosen a side in this debate, congratulated Nott for his work and took his side. Thus, between 1846 and 1850, most of the greatest scientists of the United States converged to espouse polygenism. Nott, Morton and a few other men will form what is now known as the American School of Anthropology. In 1854, they published together the influential work *Types of Mankind*, which will be constantly cited to defend slavery and racial segregation during the rest of the 19th century.

In this situation, the definition of the concept of species had been diverted somewhat and Dr. Nott's observations are clearly unscientific. However, McWhorter considers that it would be wrong to think that this concept was previously apolitical and that it was transformed to serve against black and indigenous populations. She writes: "It was possible to shape the concept of species to serve the oppressive function of separating whites from blacks because it was already - as the Buffon nominalist admits - a tool for marking separations in the heterogeneous continuities of nature". Used rigidly, it positively denies the relational entanglement of living organisms that makes up our reality. Buffon, just like Darwin, found a practical meaning to it, but no real application.

Speak of the devil... 5 years later, Darwin published *The Origin of Species*. This publication reopened the debate on polygenism by its conceptualization of evolution, which broadly underlines the links and proximities between various species deriving from the same ancestors. However, other aspects of this theory attract the most attention, particularly the functioning of evolution by natural selection. The logic constituting this last concept will soon be taken up to reinforce the segregationist spirit, the discourse on purity of race and social control mechanisms. Indeed, civilization and technology will quickly be seen as the apex of evolution and the different peoples of the world, not having "reached" the same "stage" of development, will be seen as less evolved. Similarly, it will be considered that within an evolved species, misadapted beings will necessarily be born, and natural selection would normally be responsible for their disposal. Fears therefore began to mount at the beginning of the 20th century among the Caucasian elite: what if the current state of civilization thwarted this process of natural selection and slowed down or even completely stopped the process of evolution? Several theorists, such as Madison Grant, among other things founder of the Bronx zoo and a great conservationist, will go as far as to militate for state control of the reproductive capacities of criminals, the

sick, the crazy, the homosexuals, the homeless, as well as Jews, blacks and indigenous people.

In 1917, considering immigration as a form of sexual promiscuity, Grant and other influential intellectuals allied themselves with groups such as the League for the Restriction of Immigration, the American Breeder's Association (which will become the American Genetics Association) and another association with too long a name that will become the American Psychiatric Association, in order to pass a major law restricting immigration as never before in the United States. The horrors of these years are uncountable and unnameable. IQ tests to flush out the "fools", then the categorization of all women who became pregnant outside of marriage, or people who do not respect gender norms, as "moral imbeciles" and their subsequent institutionalization. Hundreds of thousands of people were locked up in an attempt to prevent what was seen as a threat to natural selection and the evolution of the human species. But this was still not enough, thus forced sterilization was resorted to. Beginning as early as the end of the 19th century, it was officially endorsed by the Supreme Court of the United States in 1927. Chief Justice Oliver Wendell Holmes said on the issue: "We have seen more than once that the common good sometimes requires the sacrifice of our best citizens. It would be strange if it did not sometimes require this sacrifice from those who already undermine the strength of the state, often not even felt as a sacrifice as such by those concerned, in order to prevent us from being overwhelmed by incompetence. It is better for everyone if instead of waiting to have to execute degenerated offspring because of their crimes, or to let them die because of their imbecility, society can prevent those who are manifestly maladjusted from continuing their lineage. »

In 1972, the number of people sterilized without consent in the United States was as high as 65,000 (and the situation continued in the 1970s and afterwards, especially for Latina women, just as it continued in Canada against Indigenous women). The Nazis learned a lot from American eugenicists, especially about forced sterilization. They even based their 1934 Involuntary Sterilization Act on the model law written by the American biologist Harry Laughlin in 1922 and passed in 30 U.S. states. Note that in Canada, laws based on the same model were adopted in Alberta and British Columbia.

Eugenics continued to grow in the United States and then lost its legitimacy when the atrocities of Nazi extermination became known. Ladelle McWhorter insists, however, that the supporters of eugenics are always well established in the discipline of genetics. You may not be surprised to know that one of their focal points is... the definition of the term species! Ernst Mayr, hailed at his death as "the most eminent evolutionary biologist of the 20th century", defended until the end of his life in 2005 that species were "natural population groups capable of mating and which are reproductively isolated from other groups". In short, a species is a population sharing a genetic pool. Nothing terrible, right? Just wait until Mayr starts talking about speciation and how, in order to become a "good species", a gene pool must erect a

number of dams to protect itself against foreign genetic currents. So a species is supposedly defined by its ability to set up "reproductive isolation mechanisms".

But this concept is contested and many other definitions of species exist today. The reproductive capacity of its members is still central, but generally from a more positive perspective, such as that of Paterson who writes: a species is "the most inclusive population of two-parent individual organisms who share a common fertilization system". The fertilization system is presented here as a tool to promote reproduction, unlike reproductive isolation mechanisms that inhibit it. Things get worse when Paterson details what he understands by a fertilization system and the different "adaptations" that constitute it, even for simple eukaryotes, including signal systems to locate suitable copulation partners. And of course, by suitable, he means members of the opposite sex. So here we are, still in a evolutionary conception that sees homosexuality as an error, or a misadaptation.

How could it be otherwise! Reproduction is the central engine of evolution, therefore organisms that do not participate in it do not either participate in, or even harm, evolution. Relentless logic that we will dissect in the next article.

In the meantime, let's allow the information in this article to decant a little:

All the violence of racism is contained in the history of sciences such as anthropology and biology... The strength with which a certain conceptualization of the world makes visible and invisible some parts of the swarming complexity of reality, making possible some relationships to this world and inhibiting others... All the baggage of the term "species", which has barely been touched upon in this article. Let's move on remembering that one day the horrors of this civilization will end and that we will live.

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" What I observe, in the species I study [macaques], is an unbelievable sexual diversity which is very common, I see it every day, and the traditional evolutionary theories dealing with sexual behavior are inadequate and much too poor to account for what is really happening. »

-Primatologist Paul Vasey

Where were we?

In the first article of this series, we learned that animals have diverse and often queer sexualities and affections. In the second article, we dissected how this fact has been concealed through a series of processes in the scientific world, and although it is now widely accepted, it is still considered disconcerting. Indeed, what is reduced to

"animal homosexuality" is empirically proven, but the scientific community still struggles to explain it. In this third article, we will thus discuss the stage that necessarily follows becoming aware of this "new" fact : to determine if it is compatible with the prevailing analytical framework, in this case the evolutionary paradigm. If I were a cynic, I would say that after failing to deny this truth, the dominant system has no choice but to try to absorb it.

We are thus exploring the question of what has been called the "darwinian paradox" of animal homosexuality. We will begin by quoting some definitions of this paradox to understand how all this has been phrased.

We will then take a look at the most recent theories offered by modern science to solve this paradox. Then, we will try to give slightly less simplistic explanations for the existence of queer desires.

The Darwinian Paradox of Animal Homosexuality

Here's how Andrea Camperio Ciani, professor of evolutionary psychology at the University of Padova, Italy, explains what is at stake: "The darwinian paradox suggests that it is impossible to maintain genes that do not promote reproduction, such as in the case of homosexuality. Considering that homosexuals reproduce significantly less than heterosexuals, genes that promote these traits should quickly disappear." Marc Dingman, author of *Your Brain Explained*, a book of neuroscientific popularization, articulates it this way: "Since homosexuals reproduce at a much lower rate than the heterosexual population, one might think that a genetic basis for homosexuality - even if it involved several different genes - would have by now disappeared from our gene pool." And yet, homosexuality abounds.

You will agree with me that this is a rather simple paradox to solve, since two of its premises are particularly weak. First, as we noted in the first article, many animals indulging in homosexual pleasures also reproduce heterosexually, sometimes even more than their strictly straight kin. Second, there is no proof of the existence of a genetic basis for homosexuality.

In any case, a host of scientists have been trying to resolve this paradox for the past few decades, and I think it is worth briefly looking at their approaches and responses. This will allow us to observe the conceptualization of homosexuality that has been produced along the way.

Evolution of Homosexuality, by Savolainen and Hodgson

Thus, modern science offers several answers to this paradox. The most popular were grouped together by Vincent Savolainen and Jason A. Hodgson in a 2016 article

entitled Evolution of Homosexuality. We're going to take time to explore some of them. The article goes as follows:

"Most theories fall into two broad categories: genetic models and epigenetic models. Genetic models usually explain the persistence of a hypothetical homosexual genetic variant (allele 1) through the indirect evolutionary benefits of this variant. Epigenetic models explain homosexual behaviour as the results of heritable changes in gene expression patterns, due to chemical modifications of the DNA of organisms in development. »

Yeah well, it's not crystal clear, but I'll try to popularize it. In this article, the explanations given for this "paradox" are grouped in two main categories: those that explain by genetic processes how natural selection has not eliminated the homosexual genes and those that explain it instead through epigenetic processes. Let's take some examples among the many theories that are presented. First, let's explore the genetic theory called "overdominance selection".

This theory holds that a hypothetical homosexual (male) gene sometimes expresses itself in a way that offers less masculinity to its bearer (in this case, it expresses itself as homosexuality), but is also sometimes expressed in a way which strengthens masculinity in its bearer (who will then be heterosexual and reproduce a lot), thus allowing the transmission of the gene in question.

Similarly, the "sexually antagonistic selection" theory - another genetic "model" - assumes that the gene for homosexuality would masculinize or feminize. A masculinizing allele would increase the "fitness" of the males, i.e. their physical health, their aptitude, in reference to Darwin's "survival of the fittest", but would diminish that of females who would inherit it, "causing homosexuality". Conversely, a feminizing allele would have a negative impact on males, making them more feminine and thus less "fit", while the same gene, born by women, would increase their reproductive capacity and chances. To sum up, these theories definitively classify homosexuality as a handicap, expounding on the serious "evolutionary cost" of this variation, and are trying to make sense of its existence by assuming that the gene causing this nuisance probably causes its opposite in other individuals who will take care of transmitting it to their numerous offspring.

Let's continue the synthesis of the Savolainen and Hodgson article with an example of an epigenetic theory. In this theory, homosexuality is considered to be caused by "epigenetic marks", which are changes in the packaging of DNA and have an impact on the development of the brain and genitals of fetuses. In the "maternal and paternal effect" theory, one considers that parents could pass onto their children epigenetic marks not in accord with their biological sex, thus causing homosexuality. Thus, a mother might give her son her own epigenetic marks (which will be discordant since she is a woman and he is a boy), which will affect his brain, transmitting a woman's sexual preferences, i.e., an attraction to men (it's not a joke, this is how it's explained).

Conversely, a father can give discordant epigenetic marks to his daughter. In short, for these "scientists", homosexuality is a mistake that is constantly being made.

In both cases, mechanisms that are consistent with the doctrine of evolution manage to explain the omnipresence of homosexual desires in the animal world and how the survival of genes causes something regarded as an obstacle to reproduction. In doing so, however, homosexuality is conceptualized in a fundamentally negative way, keeping the focus strictly on the question of reproduction, thus neglecting to reflect on the many other aspects of these sexual practices. Unfortunately for their advocates, however, these theories are not supported by any germane observations or studies. Furthermore, as noted in the introduction, they are most often based on the existence of a few homosexual genes. Last year, the largest study on the subject was conducted with the participation of half a million people. Their conclusion? These homosexual genes do not exist. "Instead, scientists believe that preferences are influenced by thousands of genetic variations that interact with many other factors to produce an otherwise more complex sexual diversity than is often described." It took a lot of work to figure that out!

In my opinion, these theories are further proof of the inability of a certain types of scientists to interact with complex subjects related to life. I know I'm tough, but I'm full of frustration against a certain Science that is not conscious of what it invalidates and what it produces, of the ultimate importance of a fringe of reality invisible to its eyes. (I am also worried by the resurgence of an anti-science right-wing - which ridicules the pandemic, by example - and I question myself a lot about the dangers of criticizing Science at the moment).

Anyway, I don't see how these outrageously simplistic answers could help to understand the phenomenon of homosexual desires.

I greatly desire to tell them: If you want to talk about genes, please add a few layers of complexity, for example, "it is very likely that a host of different genetic combinations favour the emergence of certain affective dispositions, which, in social context X and through personal history, often translates, among other things, into homosexual desires". Besides, I don't believe that anything interesting will emerge from an exclusive focus on genes...

Queer desires

Now, it is high time to get down to business and try to start formulatig a hopefully richer answer to the mystery of queer desires. It seems more prudent to me to argue that these desires, like the many others sensualities, affectivities, intimacies and

passions that are not reduced to heterosexual reproduction, exist for reasons that go beyond the reductive vision of evolution put forward by most people. Darwin theorized a natural selection that emphasizes competition between individuals of the same group to survive and reproduce. Obviously, a multitude of other relations to the world and to each other compose life on Earth. One could answer, like Kropotkin, that mutual aid is much more significant in the wild world. However, the tangle of bodies that we can observe on Earth leads me to think that this concept is also reductive. Let's talk about pleasure, let's talk about warmth, let's talk about complicity, let's talk about security, trust, vulnerability and appeasement without which it is impossible to talk about sex, life and the immense efforts that all living creatures deploy to continue to live.

Moreover, even by talking about all of these things, we would only be talking about one facet of evolution. It could also be approached from another angle by studying the beings that shape each other through a host of diverse interactions, often invisible, to the point where the limits of one another are blurred. We could see this co-constitution as the engine of evolution. Some will even say that queer desires are leading to this co-constitution. Catriona Mortimer-Sandilands and Bruce Erickson are among them; in the introduction of *Queer Ecologies*, they support the idea that queer desires are "the quintessence of vital forces, since it is precisely [these] which create the interspecies non-reproductive, experimental, co-adaptive and symbiotic couplings that become evolution". But maybe they also don't need to produce anything to be given value. Perhaps the sensual bonds that hold the world together need to be nourished by the manifestation of these desires? Perhaps incongruous intimacies are those that lead to the most fabulous treasures, whilst life is based on the discovery of these treasures? Perhaps the pleasure of all bodies is more important for our survival than reproduction? Perhaps these kaleidoscopic eroticisms facilitate the access of certain people to a necessary relationship to the world which, if forgotten, would lead to our collective death?

Conclusion

These different reflections lead us to take a more comprehensive look at the vast sexual desires and practices of animals like us. They have sex for a multitude of reasons, and surely also for no reason at all, and often the shape of their partner(s)' genitalia is of no importance or is important differently. If there are genes linked to this sexual abundance, they are numerous, and if natural selection has not eliminated them, it may be because they are related to emotions, passions and intimacies that have their place in this world, including in the struggle for animal survival (if you want to put it that way).

These practices go far beyond the issue of homosexuality and are rather related to sensuality of the world and bodies.

But I don't intend to stop here. After having made a long journey to explain all that is revolting in the scientific approach to the sexual diversity of animals, this article has begun to present reflections that go in a whole other direction. I intend to deepen these reflections in the last article in this series. So many questions remain to be asked. For example, what can we understand about evolution by studying, as Lynn Margulis does, the symbiotic relationships between different microorganisms? Or by questioning, like Ellen Meloy, the sensuality of certain flowers and their aphrodisiac red? Or theorizing, like Myra J. Hird, the joy of sex in fungi, bacteria and plants? Or even by dissecting, like Stéphanie Rutherford, the discourse surrounding the appearance of "coyloups", these hybrids of coyotes, wolves and dogs?»

Bonus: Timothy Morton in an article entitled Queer Ecology :

"Just read Darwin. Evolution means that lifeforms are made of other lifeforms. Entities are mutually determining: they exist in relation to each other and derive from each other. Nothing exists independently, and nothing comes from nothing. At the level of DNA, it is impossible to distinguish a "true" code sequence from a viral code insertion. »

"You want anti-essentialist performativity? Again, just read Darwin. The engine of sexual selection is sexual display, not the "survival of the fittest"".