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# A STAR IS BORN

An intimate look at the  
Franklin Park Zoo's yearlong effort  
to bring a baby gorilla into the world.

BY TIMOTHY MAHER



# A STAR IS BORN

*Thanks to a team of vets and keepers, careful genetic calculations, and a dash of plain luck, a very special baby gorilla arrived at Franklin Park earlier this month. The new addition to Kiki and Kitombe's family holds the promise of lifting the zoo's fortunes.*

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BY TIMOTHY MAHER

**I**f you'd visited Franklin Park Zoo late last December, you might have been privy to a rare sight: two gorillas in the act of baby making.

A winter weekday is typically a slow day at the zoo, and December 29 was no exception – 135 visitors, compared with the several thousand who might appear on a summer Saturday. Still, the Tropical Forest, where the gorillas live, is the zoo's most popular exhibit, and also the warmest. So even with the low turnout, dozens of surprised visitors were there to watch Kitombe, the male, who is known as Kit, and Kiki, the female, mate three or four times that day. Some parents, in response to inquisitive children, explained that the animals were “playing leapfrog” or “wrestling.” Others took the opportunity to tell their kids about the wonders of nature. “It's pretty quick,” says assistant curator Jeannine Jackle, who manages the Tropical Forest and who has worked closely with the zoo's gorillas for just over two decades. “Thirty seconds. I've never timed it exactly, but it's pretty short.”

Twenty-three days before, zoo staffers had stopped hiding a daily birth-control pill, the same kind used by humans, in Kiki's morning oatmeal. Over the past few days, the gorilla had been showing signs of estrus. “We'd go up into the gorilla holding area in the morning, and you could smell it,” Jackle says. “It's kind of a skunky, musky smell, which the males key in on right away.”

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*Timothy Maher lives in Somerville. His fiction has been published in the Massachusetts Review, and he's almost done writing his first novel. Send comments to [magazine@globe.com](mailto:magazine@globe.com).*



**BIG DEBUT** Kiki and her newborn were introduced to the public at the Franklin Park Zoo on November 4, a little more than 24 hours after the birth.





Some gorillas will mate even when the female is on the pill, but Kit and Kiki, for whatever reason, do not. So, before today, neither had mated in more than five years. Their daughters, Kira, then 10, and Kimani, 5, were there to see the initial attempt at Kit's "wrestling" with Kiki, and neither reacted well to the sight. "They ganged up on him," Jackle says. "They jumped on him and bit him. Either they didn't know what was going on or they didn't like it." There were no flowers, no music or candlelight. When it was over, both gorillas went back to their business as if nothing had happened – until they decided to get together again a few hours later.

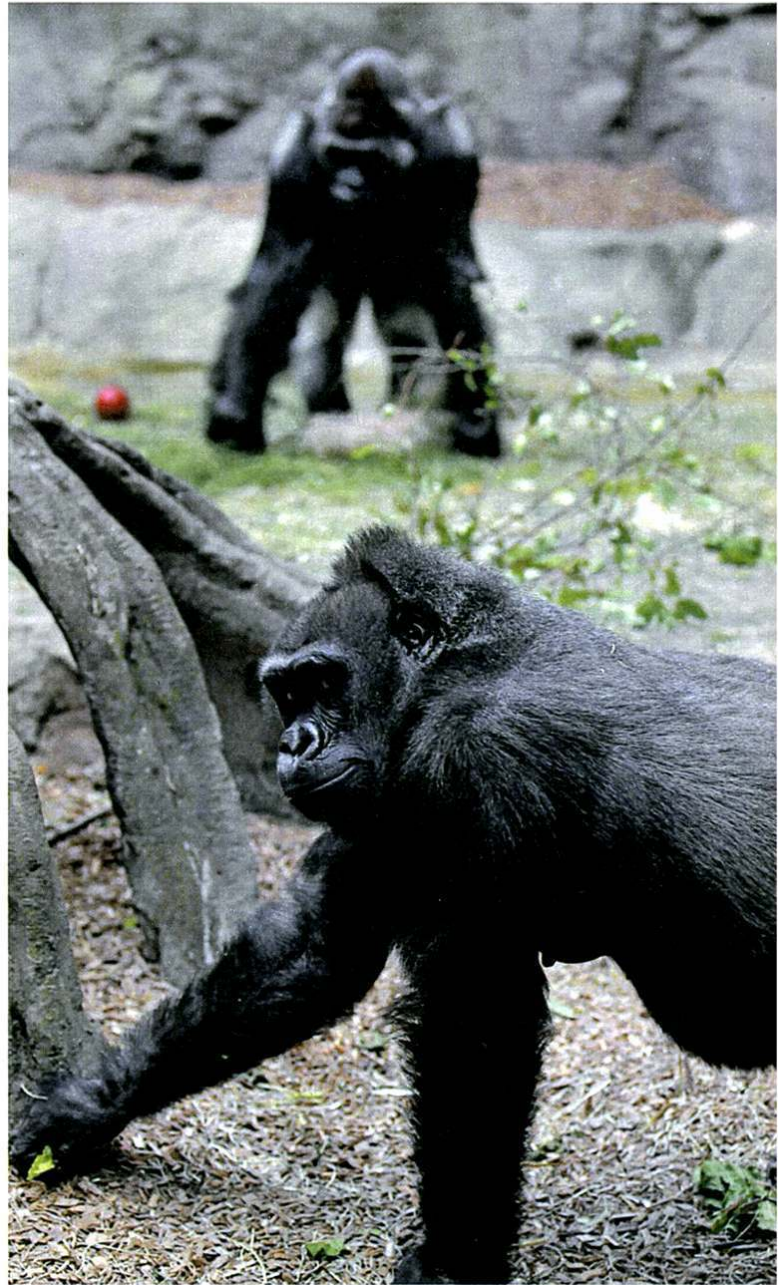
**T**his was a beginning, of sorts – though the zoo's new star attraction wouldn't be conceived for a month or so. But the real beginning occurred long before. What happened between Kit and Kiki that winter day involved years of planning, the cooperation of 52 zoos, and the creation and maintenance of an elaborate family tree tracing the genetic background of the 350 gorillas now in captivity all over North America. The recent breeding at Franklin Park Zoo took place under the guidance of a Species Survival Plan, or SSP, run by the Association of Zoos and Aquariums, a network of accredited institutions. An SSP manages the captive population of a species and works to ensure its genetic diversity; there are now 116 SSPs for 172 species.

The SSPs are part of a reinvention of zoos that began more than 40 years ago. Before the 1970s, zoos mostly saw themselves as entertainment venues. Those who ran them tended to devote little thought to the fate of species or to the emotional well-being of individual animals. The idea was for visitors to get a close-up look, and if that meant keeping an animal in solitude in a cage with bars, so be it. Experts have since learned that animals are far more complex than we'd imagined. They have interior lives, and they can get bored and stressed.

Zoos in the last few decades have dramatically changed their exhibits, says Rory Browne, a zoo historian at Boston College who is a board member of Zoo New England, the group that operates Franklin Park Zoo in Dorchester and Stone Zoo in Stoneham. Many modern displays attempt to mimic the wild. They're larger and give the animals more breathing room. And instead of mere funhouses, today's zoos promote themselves as agents of conservation, players in the great fight against the extinction of species.

And the western lowland gorilla is critically endangered, according to the International Union for the Conservation of Nature. To be "critically endangered" means that a species is one rung above "extinct in the wild." Experts estimate that there are fewer than 200,000 gorillas in the wild, mostly in western and central Africa. Many gorillas have been killed by the Ebola virus, and their habitat has been largely destroyed by human encroachment. Roads make it easy for people with guns to access the deep forest where the gorillas live. They're hunted and killed for what's called bushmeat – for food. "It's a cultural thing," Jackle says. "For certain holidays, a family will want to have gorilla. Just like we want to eat deer or lobster. And unfortunately, it becomes an endangered species, and people still want to eat it."

**O**n February 3, a dozen zoo employees – vet techs, curators, keepers – gathered in the zoo's veterinary building in a fluorescent-lit exam room dominated by a stainless-steel table and loaded with tubes, hoses, wires, monitors, and surgical tools. It's strictly clinical, but that morning the room had the feel of a party. An hour earlier, the keepers had given Kiki a little extra apple juice. The resulting puddle of urine was syringed off the floor of her enclosure and brought here. A vet tech poured the liquid over a Clearblue pregnancy stick, purchased at CVS, and everybody waited. They were ready to celebrate. But the test was negative.



**MEET THE PARENTS** Kiki, in the foreground, and mate Kit are pictured in the Tropical Forest in September. She was less than two months away from giving birth to her third baby.

These breeding attempts don't always work out, despite all the planning. As with people, animals can have fertility problems. And they prefer to like each other. "That's the part science hasn't solved," says John Piazza, the zoo's mammal curator.

Last year, the zoo received the OK from the SSP to breed one of their bongos, a rare and beautiful species of forest-dwelling African antelope. In the summer of 2009, the zoo arranged for Annakiya, a 6-year-old female, to meet Junior, a 3-year-old male from a zoo in South Dakota. The introduction was uneventful, but a few months after Junior's arrival, he charged Annakiya, and the animals had to be separated. They've since been cautiously reintroduced, but so far, no baby.

When young do arrive, there can still be problems. In recent years, a ring-tailed lemur pair named Tango and Lulu has twice mated successfully. But Lulu failed to nurse the offspring, so the zoo staff was forced to bottle-feed them until they were old enough to return to the group. This keeps the animals alive, but can cause them to identify with humans.



**VIDEO**

[boston.com/magazine](http://boston.com/magazine)

Meet Kiki and Kit's family and their caretakers at the Franklin Park Zoo.





HERE, KIKI Rachel Jakosalem, a senior keeper, coaxes the pregnant gorilla onto a scale in late June. She directs her with signs, and rewards her with oatmeal.

Even Kiki has had her troubles. For eight years in the 1990s she had access to a male named Vip. Genetically speaking, they were a good match, but they would not mate. “She refused to breed with him,” Jackle says. “Vip went off to the zoo in Seattle and fathered five female babies. Kiki wanted nothing to do with him, but in Seattle the gorillas thought he was great. Then we brought Kit in, and the first day they were introduced, Kiki bred with him. So go figure.”

On March 18, there was another pregnancy test for Kiki in the same exam room, but this time just a few people showed up to watch. Sharon O’Keefe, who oversees the zoo’s veterinary nursing staff, pulled on a pair of blue rubber gloves and poured the urine over the stick. It’s supposed to take 3 minutes, but the result showed up almost immediately. “There you go,” she said. “She’s having a baby.”

Every year, about 30 mammals are born at Franklin Park Zoo, but few get as much attention as a baby gorilla. We’re fascinated with gorillas “because they’re like us,” Jackle says. The glass barriers at the Tropical Forest let you get up close, sometimes within inches, and you can see how the eyes of a gorilla, or its hands, are remarkably human, and yet very different.

And you can get to know their personalities. Jackle says she’s closest with Gigi, the oldest female, who is shy and reclusive. Little Joe, the most impressive physically and possibly the smartest of the group, likes to strut and flex and throw back his shoulders and glare. Okie is playful but thoughtful. Kiki’s warm and mothering, but she can hold her own, even with the males. Kira, the oldest of Kit and Kiki’s daughters, is strong and

**“They only know this,” says assistant curator Jeannine Jackle. “When there aren’t any guests, they’ll sit at the windows and they’ll look for them, and if you’re the only one in here, you’ll get a lot of attention.”**

confident. Kimani is still maturing, small enough to get special treatment from the grown-ups. Kit mostly minds his own business. You’ll see him on exhibit munching on his kale (gorillas are vegetarians), oblivious to whatever’s happening on the other side of the glass. Jackle calls him a “gorilla’s gorilla,” meaning he doesn’t care about people. “He just likes gorillas.” But then Kit was raised by his gorilla parents. The other adults were raised at least in part by zookeepers.

Jackle laughs when someone asks if the gorillas wonder what the hell is going on. “They only know this,” she says. “This is what they were born into. I don’t think they think twice about it. When there aren’t any guests, they’ll sit at the windows and they’ll look for them, and if you’re the only one in here, you’ll get a lot of attention.”

Zoos are well aware of this mutual attraction, which means they don’t view gorillas as just another animal. “At zoos, we like to say that gorillas are the most political of the species,” says John Linehan, president of Zoo New England. Visitors like them, so zoos want them. But there are only so many to go around. A female gorilla will give birth only once every four or five years. That’s their natural cycle. And there’s limited enclosure space: enough for about 400 gorillas in North America. Financial factors keep this number steady. In the past, a zoo might have put a gorilla in a cage that would cost a few thousand dollars. Today’s exhibits that mimic the wild can cost \$20 million.

The desire for gorillas has sometimes led to “spitting matches” between zoo directors, Linehan says, “Especially with the older directors, the ones that came from that 40-year-ago period, who think of themselves more as showmen. They will fight harder in spite of the biological needs of the species. But it’s gotten less political as some of those characters have left the business.”

Every so often, a zoo baby becomes a phenomenon. In 2005, Tai Shan the panda cub spawned massive crowds at the National Zoo in Washington, D.C. In 2007, Knut the polar bear became a sensation at the Berlin Zoo after the mother rejected the cub and zookeepers hand-reared him. An attendance frenzy ensued, and the zoo’s revenue increased by 5 million euros that year. In American money, that would have been nearly \$7 million – more than the entire \$5 million budget that Zoo New England received from the state this year.

Linehan says he’d love that kind of attention, but not at the cost of betraying the zoo’s mission. “There are ways we could try to replicate that,” he says. “If we had a baby gorilla that we hand-raised, we could carry it around the city and take it to talk shows. We could do that for a year, at least, and that would create a phenomenon. But we can’t do that. That’s where the business end of things and the ethical mission clash.”

Fifty years ago, a zoo that wanted a new gorilla might have just captured one from the wild. When Linehan started at Franklin Park 30 years ago as a keeper, cleaning out cages and feeding the animals, his boss would tell stories from the old days about going to Africa and capturing animals from the back of a jeep with a noose. “It’s a different world now,” Linehan says.

Nonetheless, given the zoo’s budget crisis last year (Governor Deval Patrick planned to cut Zoo New England’s state funding from \$6.5 million to \$2.5 million, but later restored it to \$5 million), the go-ahead to breed Kit and Kiki might seem like more than a happy coincidence: The budget crisis happened in July. The breeding recommendation arrived in August. But Linehan says the two events were not linked in any way. He says the coordi-



nator of the gorilla SSP, the person ultimately responsible for the decision, probably wasn't even aware of the zoo's money troubles.

That coordinator, Kristen Lukas, a gorilla expert at the Cleveland Metroparks Zoo, says the zoo's financial situation didn't enter her mind. "Oh, goodness, no, we don't look at anything like that," she says. "There may have been a time, a long time ago, when it was more about politics, but that time is long gone."

A breeding recommendation, she says, is based on the SSP's "stud book," essentially an elaborate family tree that includes every captive gorilla in North America. The SSP tries to match gorillas that don't have a lot of brothers and sisters and cousins at other zoos. "So if you have a lot of relatives in the population, then you have what's called a high mean kinship, and that means you are less desirable for breeding," Lukas says.

Gigi, Okie, and Little Joe have lots of relatives at other zoos. Kit and Kiki do not.

**O**n June 24, Kiki was due for a weight check. This was done on a scale inside the gorilla holding area, a part of the Tropical Forest that isn't open to the public. It is essentially a large room divided by heavy-gauge galvanized mesh from floor to ceiling. The keepers can reach through the mesh and touch the animals with their fingers and spoon-feed them oatmeal or little biscuits made of corn and wheat and soy, known as monkey chow. At her last weight check, Kiki was 206 pounds, up from a starting weight of 185.

The gorillas have been trained, via positive reinforcement, to sit still on the scale. Rachel Jakosalem, a senior keeper, hunched down opposite the scale, pointed her finger upward, and drew a few quick circles in the air, like an umpire signaling a home run. This prompted Kiki to sit on the scale with her back against the mesh. Jakosalem held a few fingers against Kiki's back, a signal to sit still. Above Kiki's head was a digital weight readout. After a couple of seconds, Jakosalem removed her fingers and Kiki got her reward: a few spoonfuls of oatmeal.

Getting the weight is no easy thing. A second keeper had to distract the other gorillas in the enclosure with treats. But gorillas are playful and inquisitive and mischievous, and they want to know what's going on. They jumped on Kiki and banged the wall, then ran into the corner and acted innocent. It took a good 10 minutes to get three weight readings on Kiki, enough to persuade Jackle that the readings were accurate.

But Kiki only weighed 200 pounds. She'd lost 6 pounds in two weeks. Jackle suspected that there was nothing to worry about, since Kiki had shown no signs of illness and was eating well. Jackle thought maybe the weight from two weeks ago was inaccurate. But she didn't really know.

Kiki is older for a gorilla mother. At 29, she's the rough equivalent of a woman being pregnant at 40. And many things can go wrong with a gorilla birth—often the same sorts of problems that humans can encounter. The baby can get wedged in the birth canal, for instance, or the placenta might detach early and block the baby's way.

And yet Eric Baitchman, director of veterinary services at Franklin Park Zoo, anticipates none of these problems and won't examine Kiki at all during the pregnancy. A thorough examination would involve putting the animal under anesthesia so he can draw blood—something he'd prefer to do as rarely as possible even with an animal that isn't pregnant. He's never been present for a gorilla birth and won't be there for this one. "We're not going to sit there and stare at them," Baitchman says. "That will just make them uncomfortable. The animal doesn't want you there anyway. They're looking for a quiet area and a quiet time with no people around. Usually you just come in in the morning and there's a fresh baby there."

Eleven years ago, when Kiki was pregnant with Kira, things weren't nearly so relaxed. One concern was that Kiki had been hand-reared at the Bronx Zoo and later the Philadelphia Zoo. This wasn't unusual in the early '80s, but zoos now operate on the principle that gorillas learn best from other gorillas. So the zoo staff was frantic that Kiki wouldn't know what to do with the newborn. One zoo staffer's wife had just given birth, and they brought her in twice a week for a month to breast-feed in front

## **"Zoos have to breed the animals," says former zoo director David Hancocks. "They can't go out into the wild and capture gorillas. . . . They're keeping the shelves stocked."**

of Kiki, just to show her how it was done. Keepers camped out at night next to the gorilla holding area in case the baby came in the middle of the night.

They were right to be afraid. Kira arrived healthy, but Kiki didn't know how to nurse. "It was painful," Jackle says. "She was a good mom, she held it, but she didn't know what to do with it. She'd never held a baby before, so she held it on her head, she held it everywhere she could put it, but not on her breast. And then finally 36 hours later the milk came and somehow she got the baby in the right position by accident."

When Kimani was born five years later, the zoo staff mostly left Kiki alone to do her thing. They were confident that she knew what to do. Shannon Finn, a senior keeper who works almost exclusively with the gorillas, arrived one morning and Kimani was just there. Finn was the first person to see her. Kiki held the baby. The other gorillas, especially the males, kept their distance.

**B**y late July, Kiki's weight was up to 215 pounds and everything appeared to be coming along fine. Finn would notice Kiki walking "a little slower in her step, but that's really about it." By early August, visitors started asking if the plump-looking gorilla was pregnant.

By mid-August Kiki had gained another 4 pounds. Jackle says she has no idea what the average weight gain is for a pregnant gorilla. "It's like with humans, it's individual," she says. "Some women gain 15 pounds, some women gain 50 pounds."

On August 16, the zoo began promoting the upcoming birth. It announced that Kiki was expecting and invited the public to a "baby shower" at the zoo, asking visitors to bring donations for a charity benefiting human babies. It also made plans for a baby-naming contest.

**K**iki's baby will live its life in captivity. It's a nice idea, that a zoo can keep a certain population of a species intact in order to repopulate the wild. And that does, in fact, happen, in small doses. Linehan points to Zoo New England's role in helping to reintroduce the Mexican gray wolf into the American Southwest.

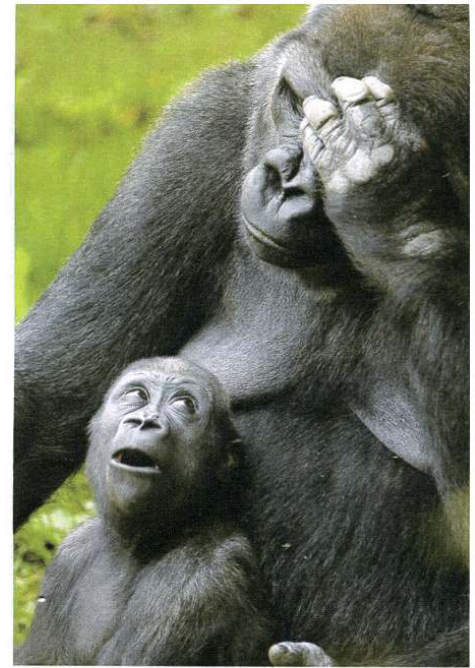
But gorillas are more problematic. Deforestation means there's less wild for them to go back to. And it's questionable that a captive gorilla would have the skills to survive in the wild. Kiki's baby will likely travel one day, but it will only be to another zoo, a different enclosure.

Which leads to the question: Should we even be breeding wild animals in captivity? If there are 350 gorillas in captivity in North America and fewer than 200,000 left in the wild, how much of an effect can a zoo-based breeding program have on a species?

Some experts say: not much of one. Among these critics is David Hancocks, a former director of the Woodland Park Zoo in Seattle and the Arizona-Sonora Desert Museum in Tucson, and author of *A Different Nature: The Paradoxical World of Zoos and Their Uncertain Future*. Hancocks argues that zoos took a wrong turn with the emphasis on conservation. He thinks preservation of habitat should be the main focus and says zoos are being disingenuous when they imply that their breeding programs have a measurable effect on wild populations.

"Zoos have to breed the animals," Hancocks says, "because they can't do it like they did in the old days. They can't go out into the wild and capture gorillas. So it's really just a basic sensible business plan. They're keeping the shelves stocked. But it's got nothing to do with ensuring the survival of





**WORKING MOM** Kiki with then-baby Kira, at left, in 2002, and with Kimani, 1 at the time, in 2006. Adult female gorillas can have offspring only once every four or five years.

gorillas in the real world.”

Even those within the zoo community concede that the effect that zoos can have on what’s happening to animals outside captivity is minimal. Pizzazz says, “With a lot of these programs, it’s a wish and a prayer that we can someday get them back into the wild.” Browne says that the best a zoo breeding program can hope to achieve is “a drop in the bucket” compared with the problems animals face in the world.

But Linehan argues that zoos do, in fact, have an important role to play – even if the target of their effort ends up being less the gorillas than the people who come to see them.

“For too many people, zoos are about the only link they have with nature,” Linehan says. “We’re creating an appreciation for the other living things on the planet. So our first and foremost role is in influencing people’s understanding and appreciation for populations in the wild and getting them to behave in ways that support what’s left.”

**B**y early September, Kiki was six or seven months pregnant – nobody knew for sure. Gorilla gestation is typically 8½ months. After the initial breeding activity in late December, Kit and Kiki mated again in late January and early March. So the baby could arrive in six weeks or 2½ months.

The zoo staff can’t gauge the likelihood of a due date based on looks. Gorilla babies are smaller than human babies – 4 to 5 pounds, on average, so gorilla mothers don’t show as much. And gorillas tend to look beer-bellied anyway. The vets could do an ultrasound, but that could be stressful for Kiki, and the larger goal was to act as if nothing were happening. So they waited and played a guessing game.

Baitchman, the vet, says Kiki herself won’t signal that anything is about to happen until it’s almost happening. On the day of the birth she might seem slightly agitated. Just prior to the baby coming Kiki will experience the same thing a human mother might: some vaginal discharge, the water breaking, frequent urination. This will likely happen at night, with no one to see but other gorillas.

**B**ut then things don’t always turn out like you think they will. On the morning of November 3, Finn checked Kiki’s enclosure for a baby, as the keepers had done every morning for weeks, and found nothing. A little later, she shifted Kiki into a small den with her two daughters and left to prepare their breakfast. When she returned, at around 8:40 a.m., there was a small streak of blood on the floor and a tiny damp gorilla in Kiki’s arms.

She immediately called Jackle, who arrived in time to see Kiki deliver the placenta. “Its gums and hands and feet were nice and pink, so you could tell it looked good,” Jackle says. “Very strong, moving around, arms and legs kicking. It was crying quite a bit. Its eyes were open.”

Kiki licked the baby clean. Kira and Kimani, who’d seen everything happen up close, were blasé. They mostly seemed interested in breakfast. But after a while, Kimani got a good long look at her new sibling. “Mom allowed her to get pretty close, where she can sniff the baby’s head, but she’s not allowed to touch,” Jackle says. “If she reaches her hand out, mom will push her away.”

An hour later, Kit got his first glimpse of the newborn. “It almost looked like she showed him the baby,” Jackle says. “She kind of picked it up and presented it. I don’t know what her intention was, but that’s what it looked like.” Kit made noises Jackle calls purring and what Finn calls a happy grumble – a sign of contentment.

The next day, the baby’s first on exhibit, was a dreary rainy weekday with not much of a turnout, not unlike the day the previous December when Kit and Kiki had been observed mating. The gorillas tend to sleep a lot when it’s dim and rainy, so it was a quiet day. Kiki held the baby constantly and spent a lot of time away from the others, just her and her newborn. On the morning of the baby’s third day, the keepers observed a good long bout of nursing, which means Kiki can raise the baby herself.

“She seems content,” Jackle says. “She’s doing a lot of the behaviors that we see when they’re – I hate to be anthropomorphic – but when they’re happy. They wiggle their toes, they wiggle their arms. She’s holding the baby and walking back and forth. And if I can say that’s a happy gorilla without being too anthropomorphic, that’s a happy gorilla.” ■