THE LINNAEAN NEWSLETTER

Volume 63, Number 1/2 March/April 2009

KESTRELS ON WEST 25th STREET– 2007

Chuck McAlexander

The American Kestrels nesting on West 25th Street since 2004 (McAlexander 2005, 2006, 2007) started 2007 as they ended 2006, with Male1 (smaller and darker than Male2) using the nest tube as a heated, winter roost. Most mornings he perched on top of its entrance as he surveyed his territory in the early sun. Then the mood to hunt would overcome his inertia and he would take to the sky. On very cold or very wet days Male1 could be seen on his "front porch" throughout the day.

Frequently, Male1 or the female would perch on any of several favorite high places. The tops of water tanks, corners of two tall buildings, the top of a flagpole and the rungs of a ladder on the side of a round smokestack all served as frequent perches for the pair. Usually they perched separately. When one was visible, the other wasn't. Occasionally, however they would perch side by side for up to half an hour.

I didn't observe any transfer of food, courtship flights, or copulations early in the year. I had seen all of these activities by February in previous years. Probably, this missed behavior was due more to my bad timing and heavy work load than to the kestrels' indifference or apathy. They certainly were comfortable with each other and it looked as though they might stay a pair and again attempt to raise a nest of chicks. That was my hope, anyway.

On March 3, Male2 returned. The previous year this male evicted Male1 from his territory, mated with the female and sired a nest full of young. It seemed obvious he intended doing the same in 2007. He arrived earlier in the year, so Male1's involvement was not as complete as previously, but otherwise, Male2 made his dominance apparent.

Male2 was quite active in the defense of his territory. A good part of his time was spent evicting pigeons from window ledges, fire escapes and roof tops even remotely near the nest. Even a passing bird would get his attention and swift response.

Early efforts required lots of energy. Male2 would stoop down from a high perch and nearly make contact with the transgressors. Sometimes the effort would even require him to chase the offenders for half a block. But, as time went by, the pigeons learned whose turf they were on. By mid-April, all Male2 did was feint in their direction while changing perches and the pigeons would leave – for a while, anyway.

At times I found Male2 and the female perched together. This gave me an opportunity to make size comparisons between the three adults of this neighborhood. Male2 is slightly smaller than the female. This is very different from Male1's diminutive stature. My estimate is the female is about 10% larger than Male2. She is probably 25% larger than

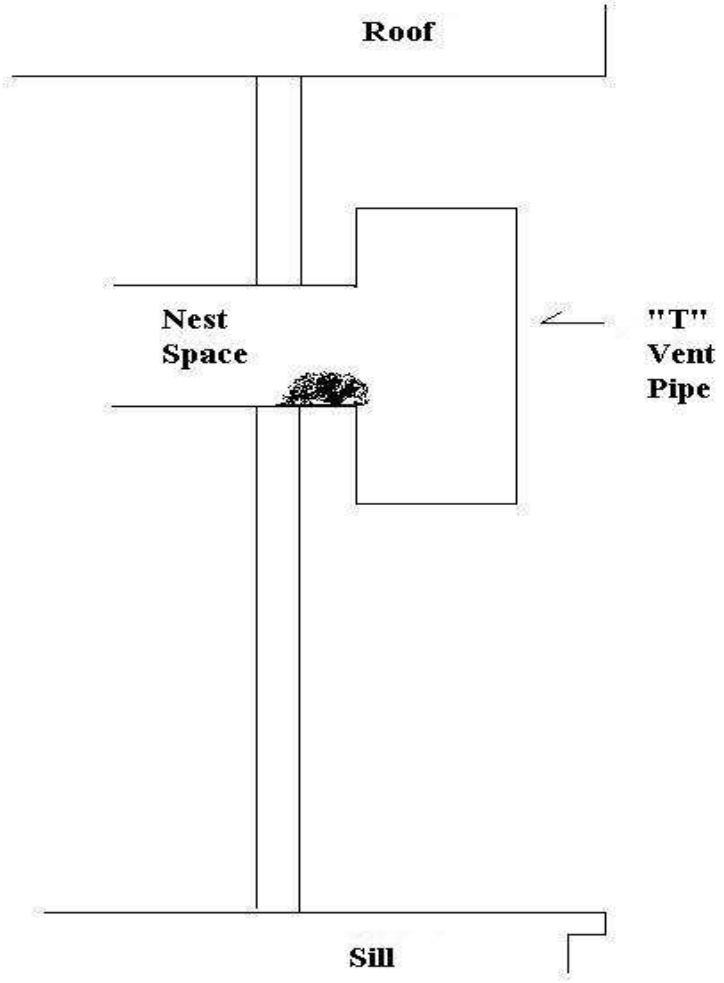
Male1, which makes Male2 about 15% larger than Male1. Even though Male2 and the female aren't that different in size, their flight styles are distinctive. Male2 is buoyant and agile. The female is heavier and pumps her wings more powerfully. Both make Male1 look like a sports car zipping in and out of sedans and SUV's on a highway.

The plumage and size differences between Male1 and Male2 made telling them apart not very difficult. The female, however, is not distinguishable from any other female kestrel I have seen. There could be a new female in the area every day and I couldn't tell the difference. So, if my differentiation of the males seems to add cachet or importance to them and if my treatment of the female seems a slight, I assure you, it is only because of this inability and not my prejudice.

By March 15 the pair no longer left the nest unguarded. They alternated occupying the tube and even when Male2 wasn't inside, he guarded the territory from a nearby high perch. I assumed the change in behavior signaled there were eggs in the nest. I could not verify this visually without disturbing the birds, so I had to live with my guess until something changed my mind.

The behavior of both members of the pair made it obvious the contents of the nest were the most important thing in their lives. By late-March, the female spent most of her time inside the cavity, but she did leave from time to time for a little body maintenance or some food. On average, she would perch on top of the tube's entrance for about five minutes out of every forty. Male2 was not yet providing her with food, so she would also go for a hunt and a meal once or twice a day. During this time, Male2 would enter the nest and presumably brood the eggs.

On March 24 the female was inside the tube as usual. Male2 was perched above, behind and out of view of the nest. The birds could not see each other and I didn't hear any calls, but that didn't prevent the female from



flying directly up to his perch for the purpose of copulation. After they finished, less than ten seconds and usually closer to five, she returned to the nest. He moved to a higher perch for continued guard duty.

On March 25 Male2 cached a catch. Probably, the notch-tailed victim was the usual House Sparrow, but identification was not conclusive with the quick looks I got. He

arrived at the top of one of his water tank perches with the very dead bird in his grasp. He then flew to the roof of a nearby building and left the catch. From there, he changed locations several times, presumably to confuse any possible onlooker who might be interested in his booty. I can't guess whether he was also trying to deceive his mate. He did the same thing two days later.

One particularly windy day Male2's sentry duty afforded me a grand demonstration of the "stoop". By chance, the male stepped off his high perch into a 15 to 25 mph headwind. He folded himself into the stoop configuration and very slowly flew almost directly over my position. In a stoop configuration, the bird's secondaries are where they would be in normal flight, held out to the side. The primaries are folded posteriorly so the tips join the body at the base of the tail. This creates a cup-shaped airfoil to provide lift. The wings are not used as control surfaces or to generate power. Gravity provides the acceleration. The tail is the main control surface in this kind of flight. It is raised or lowered to optimize pitch and is rotated or displaced laterally to correct roll and yaw. At very low speeds the alulae, the tiny "thumb" feathers at the outside of the joint where the primaries begin, are extended. They add extra control as well as maintain air flow over the airfoil to prevent a low speed stall.

By adjusting the flight path and the angle of its body relative to forward motion, the bird can make a high speed slice through the air or ride a cushion of air much more slowly to its intended destination. Flying 20 to 25 mph into a 15 to 20 mph headwind meant the bird was passing over me at less than ten mph. His speed was probably closer to two or three mph near the end of the trip when the alulae popped out and helped him steer to his new perch. I doubt a closer or better view of this kind of flight is to be had without jumping out of an airplane.

A change of Male2's behavior in the first week of April indicated the eggs, had hatched. Some time during that week he started bringing food directly into the nest. The usual routine put Male2 at the top entrance with his plucked offering, usually a House Sparrow. The female would then drop out the bottom entrance, fly up to grab the meal and then carry it to some nearby perch where she would consume it. In the meantime, Male2 entered the nest and tended the chicks until her return.

Nuptial food offerings are different from "nest food" in two ways. First, they are never plucked, as is food for the hatchlings. Second, transfer of food during courtship is, for this pair at least, from beak to beak. Food for nestlings is carried and transferred from talon to talon. Therefore, I could only deduce the female was preparing food for the hatchlings.

When the nestlings are small, the female tears their food into suitably small pieces and swallows it for partial digestion before passing it to them. As the nestlings' abilities improve, the food is plucked and taken into the nest where it is torn into larger chunks. Near fledging, half and whole birds, sans heads, are delivered to the nest, but neither adult stays to do the feeding.

Presumably, the larger, more aggressive chick gets the first food to arrive. That same chick will get the next delivery if the adults take too long to provide more food. On April 26, three plucked birds were left in the nest within forty minutes. All of this was provided by Male2. Both he and the female spent most of their time defending the area and neither spent more time in the nest than it took to drop a load of meat and take off again.

On April 19 things happened a little differently. The female emerged from the tube and perched on top for about ten seconds before she went back inside. Shortly thereafter Male2 arrived, but without food. It was as though he had been summoned by the female. He entered the nest. She dropped out the bottom and flew up, behind and again, out of sight of the nest to meet her old mate, Male1 on the rung of a ladder! No interaction (copulation) was observed, but she then dropped to the roof to retrieve a cached prey or to make a very rapid but nonchalant kill. She took the prey to the nest a minute later.

With the return of Male1, things got a little strange. Both males defended the nest and the surrounding territory, but from different perches and not from each other. Pigeons were evicted with prejudice and any passing bird was quickly informed of the error of his ways. The aggressive behavior even included the harassment and buzzing of a window washer on the adjacent building. No contact was made, but the male who was involved didn't give up until the man reentered the building.

On May 16 Male1 made another appearance. Male2 was perched on "the mantle," a decorative ledge above the eighth floor of the adjacent Whitehall Building, calmly eating what was probably another House Sparrow. When he finished his meal he flew down to the nest, perched for a quick minute, then entered. Not a full minute later the female dropped out the bottom entrance and flew up to join Male1 on the rung of a smokestack's ladder. They copulated, and then perched together for a while before the female flew off. He left shortly thereafter.

You would think that competition between breeding males would be the reason Male1 perched in a location not visible from the nest for his tryst with the female. You might also think the female joined Male1 while Male2 was stuck in the nest tube to avoid discovery. Finding both males perched side by side on the corner of a tall building usually used for guard duty lead me to think otherwise. For whatever reason, the males were tolerating each other again. I don't have a plausible explanation for this.

For the next ten days I didn't manage to observe much more than one of the three adults perched somewhere. Mid-day on May 17 was different. On the ledge just below the nest sat an immature female kestrel. Her plumage was crisp and bright. The streaking on her breast was very dark and her beak was off-white, not the medium gray of the adults. There was still just a hint of down on her head and her tail was pretty short.

Mostly she just sat, looking skyward and bobbing her head. At times, she would walk from one side of the ledge to the other. At other times her gait was two quick steps becoming a short leap. Her awkwardness and distracted demeanor amounted to a bad case of cute.

Half an hour later I spotted the new male on the block. He circled the area, flying slowly and without conviction. He had to flap a lot more than an adult to stay aloft and make some headway, but he managed. Every six or seven flaps would be punctuated by the rapid wing flutter kestrels use to maintain altitude but arrest forward motion while hunting. This youngster wasn't hunting, just trying to stay airborne. It reminded me of the tenuous movements of a child who has just managed to stay upright on roller-skates.

At one point, the young male crossed through a bright patch of sunlight which allowed me to see the small "windows" or translucent patches near the trailing edge of his wings. Generally, his plumage closely matched Male2. Nothing in his form or color indicated the influence of the smaller, darker Male1. The darkness of the streaking on the breast of the female fledgling could be of that origin, but I will never know.

After an hour, the young female, still on the ledge, was distracted by some flying insects. She made feeble attempts to catch them, but was unsuccessful. An hour later, she started flapping her wings a bit. Then, pacing from side to side on the ledge, her gait would change to a two steps and hop motion. It did not take much of this behavior to tire her to the point of immobility. She renewed her agitated effort after a short rest. Perching on the ledge and flapping your wings is risky business. Once or twice a bit stronger breeze nearly lifted her off the ledge, but she awkwardly regained her foothold. After about three hours on the ledge, she combined her two-step leap with some flapping. With time she managed to fly half way up the window before dropping back to the ledge.

By 4 PM she was very tired and pretty much immobile. Seeing she wasn't yet ready to fly, Male2 brought her the grisly remains of a catch so she wouldn't starve. She showed no

interest in the meal. She made a few more flap-leaps before I left for home, but by then, she just sat there motionless.

The next morning, May 18, in the rain, Male1 sat perched atop the nest tube as he had the previous winter. The young female must finally have gotten hungry enough, bored enough, or confident enough to step off a cliff. Or, perhaps, Male1's arrival was enough incentive. Either way, there were three adults and two juvenile kestrels in the area, all having something to do with fledging.

Later that morning, I heard a yell from the street. My downstairs neighbor, Tom Jackel, said there was a young kestrel perched on the roof of a car down the block. It wasn't flying and didn't appear inclined to do so. With the auto traffic and constant stream of pedestrian traffic I thought I should try to capture this young bird to keep it from being flattened by a passing car.

I grabbed a large towel and went to the bird. Remembering the capture of another kestrel by a Park's Department employee two years previously, I performed the perfect head fake and simultaneously launched the towel in a perfect arc over the bird. Or, so I would like to think. All I managed to do was chase the quiescent little male up into a light fixture in a loading dock on the other side of the car.

The bird was too high to reach and showed no sign of moving. I couldn't let this bird be locked inside the dock over night, so I informed the people inside of its presence. The dock was part of Studio Instrument Rentals (SIR) and all three employees had the same reaction when I described the problem. Almost in a chorus, I heard "Not another one!"

I spoke with a very nice woman named Carly who had a tale of her own to tell. Two days previously, that is, one full day before I saw my first ex-nestling, she had seen a young kestrel on the sidewalk in front of SIR. It was walking and didn't seem able to fly. It did manage to get involved with the side of a passing truck, but only seemed dazed by this. Fearing another encounter with worse consequences, Carly chased the little bugger for nearly an hour. She finally managed to capture it and, after many phone calls, relinquished it to a raptor rehabilitation center in New Jersey.

Not long after I bungled the capture of the new male, I saw yet another female on the "mantle" across the street. This female was generally light in color with medium brown streaks on her breast. There was a marked contrast to the female on the ledge the day before. This brought the total to five fledglings from the nest! First, a darkly streaked female pacing the window ledge; second, an airborne male flying above the dark female; third, a very downy and barely able to fly male I chased into the SIR loading dock; fourth, a lighter-colored female on the "mantle"; and fifth, a bird of undetermined gender in rehab somewhere in New Jersey.

I asked Carly to write her experiences capturing the fifth, actually first, fledgling. She did so and also gave me three photos of the bird sitting on a truck engine prior to capture. Even though the photos aren't gallery quality, it is plain the first/fifth bird is a female. Carly's account of the capture and the bureaucratic nightmare she endured to finally find out what was best for the bird deserve more space than I can devote here. I'll just mention that she not only saved the young female from traffic, but also fought off an Animal Control agent in the process. Thanks, and well done, Carly.

For the next three weeks it was very difficult to get a look at a kestrel on West 25th Street. I was hoping for a second clutch of eggs in the same nest, but there was absolutely no activity at that location. As things turned out, this was probably a good thing. On June 7, in a conversation with Larry, the super from Whitehall Storage, I learned the third and fourth floors of the nest building would be converted from document storage to gallery space. This would entail a huge amount of construction activity as well as new windows on those floors. Since the nest tube protrudes through the upper left corner of a window on the fourth floor, it looked most unlikely the nest would be in place for the 2008 breeding season.

The kestrels probably won't be much put out by this loss. There are many nest sites in the area which could serve them well. Some already have. The loss will be more mine. I will no longer be able to make frequent observations of the birds from such a close and convenient place – my shop. Larry has become enamored of the birds, too. Consequently, he is willing to allow me to place one or two nest boxes on the building, above but near the current nest site. I can only hope the birds will find one of them attractive.

With any luck, and Larry's good will, I will get the nest tube when it is removed. I don't know if anything can be learned from this artifact, but there has been a visible change, in the entrance over the past two years. Three and four years ago the entrance was totally clear. There was no evidence of any "nest building" by the kestrels. Last year the front edge of the tube started acquiring a bit of a build-up of what I presume to be kestrel dung. This year, the dung forms a retaining wall covering the bottom fifth of the tube. Originally I thought this might be accidental, but now, with its continued growth and obvious utility, I'm not so sure.

The rest of June, all of July and until August 26 I saw mostly nothing. The sighting on the 26th was an unsuccessful attempt at predation by a male. On August 30 I got a lousy, back-lit, wind-blown silhouette to admire. It was like giving a man dying of thirst just enough water to remind him of his plight. It was torture.

September's observations were few and far between, too. I did get some good looks at a young female which was molting or possibly had flown through a fan. September 30 gave me some food for thought. A little before 7 AM a young male came furiously pumping to the west along 25th Street. He flew at the same level as the nest tube, which is just below rooftop level. Just as he passed my position, he flipped up and over the top of the wall to the roof of the building. I presumed he was hunting and had located his quarry on the roof from another, higher position. Then, he used the front of the building to hide himself from his target, until he was very close and moving at good speed. I don't know if he was successful in this hunt and it is presumptuous to draw this grand conclusion from a single observation, but the bird sure looked like he knew exactly what he was doing.

Through October my occasional sightings of a kestrel or two were just enough to make me hope one of them might again spend the winter in the nest tube. It serves well as a winter roost, if only because it is heated and the supply of House Sparrows in the neighborhood never seems to dwindle. There had not yet been any detectable progress in the construction planned for the building, so I allowed myself some optimism.

November 4 brought a friendly game of "perch tag". The female would fly to a perch only to make a quick exit just before Male2 would get there. By the time he landed, she would be at, or very near a new spot. I didn't hear any loud vocalizations and neither bird seemed to be making much of an effort for speed. It looked as if they were doing it for fun. It could probably be described as activity to reinforce the pair bond, but that's a conclusion I'll leave to the experts.

Perhaps the game of perch tag was preamble to Male2's leaving for the winter. Through the remainder of November and most of December, the female was the only kestrel I saw in the area. She could be seen on any of the high perches sunning herself and perhaps, preening a bit. Her darkly streaked breast was obvious, even at a good distance.

December 20 I was again watching a darkly streaked kestrel perched on the flagpole at the end of the block. I thought it was the female until it flew down to the nest tube and entered. A flash of red on the tail as it hopped over the precipice and into the tube identified it as a male. The next morning, this small, dark male sat on the nest tube and watched the activities on his block, just as he had the previous four years. MaIe1 had returned! It was obvious he intended to spend the winter.

The pair finished the year in the neighborhood. The male roosted in the nest tube and could be found there most mornings, as

well as any time the weather was bad. The female, perhaps having spent enough time inside the tube with eggs and young, found other perches and shelter. She could be seen from time to time on a high perch, or just flying through. I finished the year with a renewed belief in Santa Claus.

Several aspects of the West 25th Street kestrels' behavior strike me as atypical, possibly to the point of being abnormal. Most striking is the tolerance of a second breeding male within the territory. The usual scenario would involve some kind of showdown between the two males for ownership and control of the nest, the territory, and the female. This struggle might include various types of display and bluff, possibly, but not necessarily leading to actual combat. It's usually a winner take all event and the loser must relocate to a safe distance from the winning bird. That isn't what happened on 25th Street this year. A search of the literature turned up one reported instance of an extra male American Kestrel helping feed a brood of young (Wegner 1976); in Oswego County, New York.

Though extra-pair copulation is known for many species of birds (including a report for the American Kestrel by Towers (1990)), as well as probably most other vertebrates, it isn't as well studied as other aspects of reproduction for at least two reasons. First, almost by definition, extra-pair copulation occurs clandestinely. When it is discovered, the attributes which made the dominant male dominant also allow him to reassert this position by physical means. Second, determining the parentage of a given nest's fledglings by genetic means is expensive, invasive, and intrusive. At a minimum it would involve capturing all the birds suspected of involvement in that nest's offspring for a given year. A kestrel study currently being done in New York City is working at getting baseline numbers for nests and individuals in the city. The funding and manpower required to do a more sophisticated genealogical and behavioral study is probably a long way off.

It would be inaccurate to claim that no dominance struggle occurred between Male1 and Male2. Upon Male2's arrival, Male1 assumed a subordinate condition and disappeared from view for some time. Only when it was relatively safe, when fledging time was near and Male2 was very occupied with the task of providing food for the young, did Male1 return to the territory.

The differences in appearance of the fledglings suggest both males contributed genetic material to the nest's young. If that is the case, Male1 must have been mating with the female about mid-March. That's two weeks after Male2 arrived and took over the territory. I assume Male1 lost the battle, but not the war. He managed, somehow, to stay in contact with the female, yet not be seen, or not be seen as a threat by Male2.

Furthermore, and flying in the face of all standard theory, are the separate but contemporaneous defenses of the nest territory by both males and that they perched together, indifferently, if not amicably, on more than one occasion. No matter how I try to fit these events into what I think I know about raptors, I'm still trying to hammer a square peg into a round hole. In the two instances of extra-pair copulations witnessed by Towers (1990) between a nesting female and an unpaired neighborhood male, the male of the pair drove off the extra male after witnessing the copulations. The male of the pair also drove off the extra male if it attempted to hunt within the pair's territory. Towers (1990) briefly discussed some theoretical possibilities why the male of the pair did not desert the female after witnessing the extra-pair copulations. In the case of the 25th Street birds, the three adults actually seemed to be tolerant of each other. A paradigm shift seems indicated, but I don't have a plausible explanation.

There is a positive aspect to this *ménage à trois*. The number of fledglings is significantly higher. When Male1 was presumed to be the only mate for the female in this nest, the largest number of fledglings was three. Usually, they managed only one or two young per nesting. It seems Male2 is more productive, but it also looks like he got some help, even if he didn't want it.

There was a possibility of a second nest after the 25th Street tube emptied. I found kestrels in frequent association with the space below a water tank on the block between West 26th and 27th Streets between 10th and 11th Avenues, but I did not find anything more than that. I didn't see any awkward fledglings late in the summer. So, while it was possible, even likely, that more kestrels fledged in the area, I can't report it as fact.

Early 2008 could be a decisive time for the 25th Street nest. The building construction schedule will determine whether the nest tube will still be in place for the 2008 season, or whether any of the nest boxes proposed to replace it are deemed worthy by the birds. By law, the nest is a protected site while it is occupied, but that leaves two windows of opportunity for the tube to be removed. Arguably, the tube could be legally removed before the female lays her first egg of the season. Even though I can document Male1's use of the site as a roost during that period, the time it would take to get the required legal action would be long enough for the birds to select another site. The second period of exposure is after the brood has fledged and the site is abandoned until the weather changes for the worse. Frankly, I am half sympathetic to the building's management. As enamored of these birds as I am, I wouldn't want any government agency telling me I could not make improvements to my property just because some dumb bird decided to plug up one of my exhaust vents with a nest.

There are other solutions and other outcomes possible in this situation. Santa was good to me in 2007. Perhaps 2008 will be as good.

Correction

In my report of the 2006 activities of the 25th Street kestrels (McAlexander 2007) I misidentified a bird which had been decapitated by Male2. At the time I concluded the bird was one of Male1's nestlings. It was very immature, the head was missing and the plumage seemed to fit a very young female kestrel. After inspection of the remains, the experts at the American Museum of Natural History disagreed. Their opinion is that the bird is most likely a very immature Mourning Dove; I defer to their expertise.

This changed identification means the infanticide and method of usurping Male1's territory and mate were different from what I reported. I regret my error and hope you will accept my apology.

Literature Cited

McAlexander, C. 2005. Kestrels on West 25th Street. *Linnaean News-Letter* Sept/Oct 59 (4/5).

McAlexander, C. 2006. Kestrels on West 25th Street–2005. *Linnaean News-Letter* April 60(2).

McAlexander, C. 2007. Kestrels on 25th Street–2006. *Linnaean News-Letter* April/May 61 (2/3).

Towers, S. R. 1990. Cuckoldry in an American Kestrel Triad. *Condor* 92(1):257-258.

Wegner, W. A. 1976. Extra-parental assistance in male American Kestrel. *Wilson Bulletin* 88(4): 670.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~~~~~

LINNAEAN NEWS-LETTER

Editor: Joseph DiCostanzo
Linnaean News-Letter
15 West 77th Street
New York, NY 10024
newsletter@linnaeannewyork.org
Manuscript acquisition: Helen Hays
Production and mailing: Thomas Endrey