310 GREENWICH STREET
SUITE 15B
NEW YORK, NY 10013
212-766-7340

PIGEONS

Donald Jenner

June, 2010

Pigeons: Environmentalists hate them (“invasive species”). New York City councilmembers loathe them (“Oy! Such poop!”). There's even a contingent of ostensibly serious rehabilitators who take the view that they aren't wildlife and aren't worth dealing with (hey guys! read your licenses...).

All the same, pigeons are (with rats, followed by feral cats and dogs) the most ubiquitous of urban wildlife, and of them all the most visible.

The ubiquity is evident from treatment records; New York's Wild Bird Fund, the largest wildlife treatment facility in town, saw 1,146 birds in 2009; the vast majority of these were sick or injured pigeons according to WBF principal Rita McMahon.

The visibility is more complex: It is not just you see them everywhere; it's that pigeons actively and willingly share our human habitat. The pigeons we encounter are *feral*; they descend from domesticated pigeons; they embody a 5,000-generation adaptation to living with people in one way or another. Perhaps surprisingly, they even like us and will seek to be with us given the slightest encouragement. Even more surprising: Pigeons will do this as much for motives that may strongly resemble human feelings of companionship, as for a desire to get a snack.

Successfully caring for pigeons — like any caring worth calling that — begins in appreciation; the mechanics of rehabilitation follow from that. I think

that is best accomplished in two ways.

There is formal study: It is really amazing how much interesting information is available about pigeons. Some of it is even pretty decent science (and some is, well, apparently dictated more by who gives grants than scientific inquiry).

Pigeons are remarkably adaptable survivors. They live in temperate area, tropical areas and almost arctic areas. Given access to sufficient calories, they survive quite well even in difficulty climates (cf: Johnson & Janiga, *The Feral Pigeon* — buy it used as it is outrageously overpriced new). Given how they always seem to be eating, it's surprising to discover that the actual per-pigeon consumption is only about 50-70 grams a day. That means in temperate areas, a good-size flock (~150 *visible* birds; add 25 percent for the ones you don't see...) eats about 20lbs. (half again more in a cold winter) of *something* a day (Johnson & Janiga, *op cit.*). [Among other things, this means that in most instances, concerns about people putting out a few ounces (or even a couple pounds_ of seed or crumbs for the birds are misplaced; most of what pigeons — and sparrows and many other “pests” — eat is the stuff we drop in our rather messy ways. They fill a useful ecological niche, in short.]

Despite the common view that pigeons proliferate without restraint, the evidence is that only about a third of the adults mate and beget, and of course, not all eggs hatch, nor do all nestlings survive to maturity (cf: Murton *et al.,* “Ecological Studies of the Feral Pigeon *Columba livia* var, I” in *J. appl. Ecol* **9**, 835-74).

Unlike most birds, pigeons can survive with some gram-negative bacteria and other nasties in their guts — do so commonly (all sorts of sources). These are hardy critters, and not zoõnotically dangerous, taken altogether. Most of the things that bite them, die if they bite us; most of the bugs they get, we won't get unless we eat them raw — that sort of thing. They surely do poop — about a tablespoon a day. It's not considered hazardous waste (the NYC Dept. of Health & Mental Hygiene recommends that truly vast quantities be wetted down to reduce dust, then bagged and put out with regular trash; human & dog poop — and kitty-poo — are more dangerous) and a good rain storm pretty much washes away accumulations out in the open. Regular hosing-down gets rid of less exposed accumulations.

Pigeons are remarkably intelligent critters: They have an uncanny ability to recognize objects and people even with changed surroundings and alterations in appearance (cf: Herrnstein *et al.* “Natural Concepts in Pigeons” in *J. exp. Psych: Animal Pro. Beh.,* **2(4),** 285-302). They are curious and they are quite definitely able to learn — from other pigeons, certainly, but also from people. Some researchers have concluded that pigeons manifest something very like metacognition — the reflection on one's own uncertainty which is part of formulating advanced learning strategies. This is hard to be sure of, as it is not the case that all human-like behaviors arise from human-like psychic processes.

On the other hand, pigeons are very interesting critters when it comes to animal studies used precisely to shed light on just such human psychic processes. One thing is quite certain: When in the distant past one line of

evolution continued down to the present in avians, and another continued down to the present in mammals, at the point where the differentiation took place (which was, of course, nothing so simple as a real point-instant...), the evolutionarily old parts of the brain were already pretty well established; one has to wonder about some of those later aspects, as well. In any case, it means that at some level, feelings — largely a function of the evolutionarily old part of the brain — are not all that different between pigeons and people.

It's a great deal more complex than that summary suggests, but the outline is clear and the argument is readily defended. There is lots of interesting stuff to learn about pigeons. Isn't it a pity more people don't study up?

This formal stuff is all well and good; it needs to be supplemented by spending time with the birds. I have noticed this with squirrel rehabilitators too; we tend to “specialize” and this results to some extent because we have spent more time with the special-object animals than with others. We get to know them and their peculiarities and special needs and so on. One may like the occasional change (I know one woman who is actually shifting away from “wildlife” to feral cats; this is an extreme case), but one does best with a small range of animals one really gets to know, it seems.

In our case, this was actually the beginning of things. The pigeons Sue and I most often take, er, under our wing are birds from a flock that is centered on the intersection where we live. We had been seeing them and playing with them long before we began healing their hurts and so on.

I use the word “play” quite deliberately. There is an element of playfulness

in the whole business. It was best before those condign bureaucratic twits in Adrian Benepe's Parks Dept. joined up with the soccer-moms-of-both-sexes to turn our local park into a KiddieLand; there were one or two relatively quiet spots where one could sit, and the birds would (quite literally) flock around. Most came for a snack; some figured out exactly where the special treats were (and to suddenly discover a pigeon sticking its head in your pocket questing for peanuts was definitely amusing) — and some would stay for awhile even after the peanuts and seeds were gone.

How far can this go? I have on more than one occasion been walking a block away from “feeding central” and I see a pigeon stop and look at me in a knowing, questioning way. I put out my hand, and it will fly to it, as if it were asking “Where are the peanuts? Do you have any today?” This is, by the bye, perfectly consistent with excellent evidence about pigeons' abilities to recognize and connect events. Then there are the times when the birds get so involved in the whole thing that, as I stroll away, the entire flock walks along with me — for a couple blocks. One does get stares when this occurs.

There is an emotional downside for us: Birds disappear. They die. They are injured and one cannot find them. They are brutally killed by obnoxious people (Bill Sykes is with us yet...). They are trapped for illegal export to Pennsylvania, where the yahoos persist in captive-pigeon shoots — and in having their ill-bred children kill the wounded but not dead birds in such charming ways as ripping their heads off, or banging the hurt bird against walls, or crushing their skulls under their heels, or just tossing them in barrels with other dying

birds, to eventually suffocate. [Pennsylvania is not, despite Hicks's vision, a peaceable kingdom.]

How Pennsylvanians see themselves. 	But check out the reality in this little video: http://www.youtube.com/watch?v=omNDNXhph7M These are *New York* pigeons, by and large.

Whatever; my purpose is not to write the cute-facts-anent-pigeons story, but rather to suggest there's lots of that stuff out there to know about pigeons and quite a lot of it is worth knowing.

Pigeons are very real candidates for a rehabilitator's attention. They get into lots of trouble — everything from environmental poisoning, to being shot with darts, BBs and so on. They are sideswiped by cars. Infants still in the nest get chucked out in the street by builders and janitors; there was even a case of birds walled into a college building by builders unfamiliar with “The Cask of Amontillado” (defective education...).

The most common problem: Thread and string get wound about a pigeon's feet. The string tightens and infection sets in. Eventually, toes, feet, even lower legs are lost. Walk around the city; look at the birds; it's rare indeed to find a group that doesn't have a bird with damaged feet. Sue and I see

enough of these that we don't even log the fix in most cases.

The first problem is getting hold of the bird; this part is tricky. Pigeons may like us, but they aren't *that* fond of us. About the only hope is to get the bird engaged in a group with other birds, gobbling down some seed, then get up immediately behind it, and come down from about 45° above and behind — about the only place a pigeon cannot see. Some birds, when taken this way, will be fairly quiet; others resist being held and worked on. Sometimes the thread can be taken off with the scissors in a small pocket-knife; sometimes we bring them upstairs because the problem is complex. We find really sharp scissors and dissecting tweezers helpful. Sometimes a headstrap loop (ours has

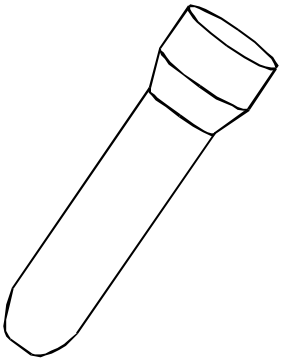
			
$28 fine stitch scissors from Jorvet; this is actually cheap; these can go for up to $90.	Coarser, $4. from Tooltron; great for most jobs, also trimmng nails.	3½" sewing scissors from Tooltron - $4; really nice, sharp, pointy scissors	Dissecting forceps, Home Science Tools, $1.60; long fine points.

has changeable lenses and a neat little LCD light) is handy, too. Sue is better at this than I am; she first puts the bird in a small plastic bag, head out through a hole in one end, legs out the other. Then she sets to work. Thread removed, and wound cleaned, we usually seal it with a bit of liquid bandage and let the birdie out. When things are really bad — a toe or two coming off, e. g., — we keep the bird in and consult with Wild Bird Fund for vet-shop based assistance as needed.

Another large class — pretty much year 'round for pigeons — is the

displaced-youngster crew. This includes nestlings who shouldn't be out, recent and generally clueless fledglings and a group of both that have had one or another serious injury. Sibling rivalry can be tough; sometimes a bigger sibling boots the smaller out (and sometimes they are inseparable...). The baby will be pretty obviously a smaller rather than larger sibling, and will be super-hungry. Food and water are the first priorities for these guys. The simple solution is basic puppy food – the hard, dry kind, “puppy chow” (we use a somewhat better brand, less reliant on indigestible “by-products”); soak the bits 'til soft, open baby's beak and pop it down. After a few bits, baby gets the idea and becomes quite seriously interested in the stuff (which can make for a bit of a handful).

Another pair of brilliant ideas came from the Wild Bird Fund: Big syringes commonly come in big tubes (see drawing), and the tubes can be converted to feeding instruments. One variant fills the tube with smaller seeds (millet works well), then uses 2” elastikon tape across the mouth and secured with adhesive tape or rubber band and a slit cut in the middle of the top. Baby quickly figures out that seed is on offer and takes a fill. For younger birds, fill the tube with Kaytee Exact hand-feeding formula on the runny side, and cover the end with a piece of latex (get the kind used in gyms for stretching exercises, available in different thicknesses and so on; a small piece lasts a long time). The youngster sees this as not a bad mommy-substitute.



If more liquid is in order, or if “jump starting” a youngster close to renal shutdown or otherwise addressing dehydration, we've had good luck orally

syringing a few milliliters of Pedialyte into the bird. This is easier to deal with than lactated Ringer's solution, doesn't require injection and is substantially less costly and more readily found when needed. Followed with moistened puppy chow bits (10-15 or so seems about right, three or four times a day for all but the youngest), this seems to quickly get things working, the evidence for which is poop.

Perhaps the biggest problem with youngsters is releasing them. They tend to be around the house longer, and even if well socialized with other pigeons, it is an artificial environment, with few threats. There are no hard and fast rules, but we can usually expect fully adult birds with some outdoor experience to show up in one usual-place or another. With the youngsters, it's about fifty-fifty that we may never see them again. It is not a little heart-wrenching to realize that youngster you have cared for, have hand-fed and tended to, and who took off so magnificently when the cage door finally opens after a week or so of acclimation, may have had only that one first flight in freedom before a truly painful death. For that alone is their ultimate fate; few die peacefully

Thread removal and just too clueless to get enough to eat are pretty easy problems to address. Wounds, broken bones and infections up the ante, obviously. Broken bones are best done with help from a vet-shop; an x-ray is really useful.

A wing broken in such a way as to compromise the joints almost certainly means a bird that will not fly again; strictly, one should euthanize (practically,

sometimes enough movement can be restored that the bird can go to a sanctuary, have a good life in a sheltered environment, and some rescuers take that route).

Broken legs are equally significant; pigeons spend a great deal of time on the ground. A one-legged pigeon has a limited survival potential, especially in winter. Interestingly, a pigeon with both legs, even if crippled in one, can do quite nicely. One bird came to use with a BB in his back; the wound left him with a withered right leg. We argued against taking the leg off, and this seems to be correct. AhQiang is a big guy and he uses his withered leg as sort of a balancing tool. He has sufficient strength in his other leg to launch into flight, and he even manages to perch on the low fence to accept his afternoon peanut snack. So, given at least limited functionality, a pigeon with two legs in so-so condition can have a reasonably good life. We see Ah Qiang regularly; sometimes he needs a nail trim, but is otherwise a clearly dominant member of his flock.

We've been seeing more back injuries this year. These come about from various encounters. Some may result from attacks of larger birds against smaller, less strident birds; some result from attacks by other animals; some come about from plain mischance. The result is a bird that can't get about, can't feed, eventually starving to death. Pigeons can heal pretty well, sometimes

getting full function back. Maggie came in unable to stand and was found to have a back problem. Feeding up, some B12 and calcium (plus some homœopathic stuff — Sue thinks it works, and so does Rita

McMahon; I note in passing, neither of them consults a homœopathic *materia medica* or repertory along the way, and that reduces this to rather wifty folk medicine at best...) and a bit of therapy — now she flies about and keeps her own with the other birds. On the other hand, as I write, I have Marble next to me. The lesion was more severe, and while it seems to be healing correctly, Marble is not getting the use of his feet back. Plenty of strength; no control. Otherwise a pretty nice little bird, but paraplegic. SOP is euthanasia; interestingly, we know some people who've adopted paraplegic pigeons and the birds seem pretty well content — at least as much so as human beings thus challenged. [Keep in mind, DEC's rules are — ambiguous... — about what private citizens may do with "invasive species". These critters are wildlife, but not quite the same as *native* wildlife. Other governing laws are equally lacking in clarity. Gray areas leave latitude for rehabilitators, and that may be remarkable bureaucratic wisdom.]

More obvious injuries involve lacerations and other nasty, bloody wounds. One bird came in with a great big hole in its foot, just up from the halix. I cleaned it up and bandaged it, but it looked nasty. Karen Heidgerd at Wild Bird Fund agreed, but did some small magic of her own. She removed dead tissue from around wound, cleaned it and put in a couple stitches, then dressed the wound with honey, covered with a small patch of Adaptic; this was then wrapped with a bit of cast-padding and vet-wrap. After a week, the stitches came out, a bit more honey (plain ordinary honey, not even manuka honey) added and the foot was re-bandaged for another week. The result: a near-perfect, almost scar-free healing and a foot that works good as new. Oh, and that little hen has a new

boy-friend.

Diseases get a bit more complex. We do our own basic tests here. This was sort of an adventure; I had not set foot in a biology class since undergraduate days a long time ago. I found it useful to take a course on microbiology; I wish my college offered a lab-techniques course as well. I also found a very good course through Idexx (they are vet-product makers among other things) on fecal analysis (I have a certificate; I can prove I really know my, er, well, there you are...). This and a great deal of reading and practice has gotten me to the point where I can do the very basic poop check for parasite eggs and untoward gut bacteria using Gram's test. There are a few others I wish I could do, and I am sufficiently puzzled by the kinds of results I see from the main vet-lab service, that I wish I could set up to do my own cultures (but here we are in a small New York City apartment...).

Generally, though, a fecal float gives a reasonably good picture of parasites present. Coccidia is easily treated in pigeons; a European coccidostat, Appertex, is a one-shot deal, and commonly kills the particular species that afflicts pigeons. Avian roundworm and capillaria are also commonplace, and are readily addressed with very tiny doses of panacur.

Bacterial infection is a bit more complex. Pigeons, unlike most birds, tolerate a certain amount of Gram-negative bacteria — including *E. coli* and *Salmonella* spp.; the issue becomes, how much is too much? They may develop *Clostridia* infections. Yeast is a commonplace occurrence. There are a few other commonplace problems that can show up even in basic tests such as Gram's

test, and the responses are pretty much standardized. Good mentoring from the vet side allows some short-circuiting of the treatment process. The standard antibiotics for such diseases — sulfamethoxazole + trimetheprim (now back in favor), metronidazole in solution, doxycycline, aureomycin — are generally available “over the counter” from sources specializing in supplies for pigeon fanciers, along with very good oral trichomonacides and so on.

More specialized medications for more involved situations. entail a prescription: I have usually had a few 250 mg tablets of cipro on hand; these can be easily crushed fine and mixed with simple syrup to produce a 25mg/ml or 12.5mg/ml solution that works for small animals. Ivermectin in solution has disappeared from the market, but one can order (with a prescription) tablets that readily mix in syrup. Clavamox is a very useful antibiotic combination, but expensive; it is useful to have a couple bottles around on hand but to be chary with it. We tend to avoid injectibles, and I confess to a real prejudice against what sometimes seems a sort of wholesale dispensing of antibiotics (“O, I just soaked a cup of seed in Baytril, then put it out for the dear little birdies.”).

Dosage is worth checking: The University of Minnesota's research animal resources has its formulary online (http://www.ahc.umn.edu/rar/umnuser /formulary.html); it covers most of the basics for different phyla and is a good check (even vets make mistakes).

Then there are some diseases to which pigeons are prey which admit of no treatment. Pigeons are pretty hardy creatures, and they can take fairly substantial doses of environmental toxins, but sometimes even they are

overwhelmed. There are some things that are within the scope of treatment a rehabilitator can administer to deal with environmental poisoning; most require more detailed veterinary treatment than can be delivered without substantial professional support.

Paramyxovirus is another tough nasty. This virus has a pigeon-specific variant; there is no treatment available. Some birds develop this when their system is otherwise weakened; Beca was like this — just chock full of parasites. We cleaned them out and bingo, he developed signs of PMV. But Beca was a tough birdie and after about six weeks had recovered sufficiently to be released; we see him regularly and he is a healthy bird. This is not always so; some pigeons have very severe cases, and for them euthanasia is the only decent option. There is a sort of grey area between “mild” and “severe”. The Wild Bird Fund's determining question is, can the bird feed itself? This is a good test.

It gets more complex: The symptoms of *Salmonella*-caused paratyphoid are very like PMV and even experienced pigeon rehabilitators (far more so than I) have taken what was most likely paratyphoid for PMV. This is a bacterial disease, and can be treated — but the common view is, a bird once infected with paratyphoid is always a carrier. Euthanasia may be more appropriate than cure, in such a case? But how to tell, absent culturing, which is hard to do, mildly risky (there are *no* beneficial *Salmonella* spp.) and costly if sent out?

It is also important to note: There are some real frauds being perpetrated in what passes for avian medicine. There is, for example, the Italian vet who recommends potassium arsenite as a treatment for paramyxovirus

(priory.com/vet/falcons.htm; cf: http://www.anapsid.org/cnd/pets/cfspets.html); this is clearly dubious, if not altogether bogus science (but interestingly, I know a couple “rescuers” and “rehabilitators” who actually proposed to try dosing pigeons with potassium arsenite to see if it would work; shades of Tom Lehrer:

> We'll murder them all amid laughter and merriment.
> Except for the few we take home to experiment.).

So, what's the point here? First, I am suggesting that pigeons are rather interesting critters, both in themselves and as a Type for rehabilitation. The opportunities for learning the species both formally and through directly developed familiarity are substantial, and both kinds of knowledge are essential to the rehabilitation effort — regardless of species. The ubiquity of the species may make pigeons an ideal “training species”. I have also shown some of the kinds of things rehabilitators dealing with pigeons do — from basic care of abandoned or orphaned youngsters to fairly substantial medical care. Finally, I have shown some of the problems that rehabilitators working with pigeons encounter that go beyond the scope of what a rehabilitator can do.