BANQUET SPEAKER

Remaining Choices

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The Owl Foundation is a place where one can watch the development of intimate relationships between individuals of most of Canada's owl species. The by-product is that recycled genes go back to wild populations in released progeny (table 1).

The physical property, about 4 ac (1.61 ha) is equally divided between a forested slope (remnant Carolinian vegetation zone) and new grassland recovered from former orchards. Geographically, we are on an ancient lake bed between the Niagara Escarpment and the south shore of Lake Ontario. Our forest slopes down from 100 ft (30.7 m) to a wide river estuary. Many of our old trees are 120 ft (36.9 m) tall with a girth of 12 ft or 3.8 m. Our latitude is the most southern in Canada (in line with Roseburg, Oregon) and our climate the most moderate in Eastern Canada. This permits all Canadian owl species, except the insectivorous Flammulated Owl (*Otus flammeolus*), to be maintained outdoors the year round.

In 1965, we embarked on a modest plan to attempt rehabilitation of injured owls to the point of responsible release. Now, 3,600 owls later, all but local owls arrive from across the continent already assessed as permanently damaged, in the hope that some use can be made of their lives.

Our challenge is to attempt the best recovery of lost faculties and broken spirits by providing the opportunity for making their own choices in every aspect of their lives. These choices include the ability to move from one defined space to another, and yet to another, through overhead corridors; to meet others of their species; to choose a territory; to select every

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Table 1.—*Canadian owl species which have produced living progeny at the Owl Foundation in Ontario, Canada.*

Owl species	No. of successful pairs	Span of breeding years per species	Approximate no. of young raised
Snowy Owl (*Nyctea scandiaca*)	6	'78/'96	57
Great Horned Owl (*Bubo virginianus*)	4	'84/'96	34
Great Gray Owl (*Strix nebulosa*)	4	'85/'96	23
Barred Owl (*Strix varia*)	4	'90/'96	9
Barn Owl (*Tyto alba*)	3	'74/'94	200
Long-eared Owl (*Asio otus*)	1	'95	1
Northern Hawk Owl (*Surnia ulula*)	3	'87/'96	34
Eastern Screech-owl (*Otus asio*)	9	'76/'96	118
Burrowing Owl (*Speotyto cunicularia*) (Great Plains race)	21	'82/'96	131
Boreal Owl (*Aegolius funereus*)	3	'83/'87	7
Northern Saw-whet Owl (*Aegolius acadicus*)	6	'79/'96	51
Flammulated Owl (*Otus flammeolus*)	2	'92/'93	1
Northern Pygmy-owl (*Glaucidium brasilianum*)	3	'85/'90	9

N.B. - Short-eared Owls (*Asio flammeus*) have produced eggs but not living progeny.
- 3 Spotted Owls (*Strix occidentalis*) have been residents but never two at the same time.
- One male Snowy Owl, wing-crippled in Alberta in 1965, in adult plumage, has sired his first chick in 1996!

size and type of roost, of all heights, of exposure or seclusion; to select from two to four available nest sites in each territory; to be alone or in company.

All of this involves withdrawal from public visitation and opens the need for private funding, since these are inherently wild but traumatized owls and spaces for recovery must be very large. This need is not just to promote the likelihood of ultimate breeding, but also to provide a suitable habitat for young owl's early experiences. A breeding pair of Snowy Owls (*Nyctea scandiaca*), even when the female is a flightless cripple, needs a minimum of 1,200 ft^2 (111 m^2). A pair of Great Gray Owls (*Strix nebulosa*) 1,000 ft^2 (92 m^2) and for them an open forest setting and cage heights to 18 ft (5.5 m). Even a wing-crippled hawk owl (*Surnia ulula*) will promptly climb 16 ft (4.8 m) to a semi-cavity nest site. In forest owls, height is security, and we must provide 'furniture' for their use in reaching acceptable levels. Finally, since these enclosures will be the first exposure to surroundings for the off-spring, they must also be able to contain live prey species, in suitable cover, which the male can catch. This is critical to the development of a memory that food moves and makes noises, food is brown and food fights back!

In our efforts to expedite breeding, after much trial and error, we have evolved a typical breeding complex to be made up of three large, double compounds, linked to each other by flight corridors. Into it we put six owls of one species, both sexes, and all corridors open. We seldom know whether the occupants have had previous pair-bonding experience in the wild (of species which tend to form life bonds) a factor that may delay new bond formation as the now captive partner apparently waits for that bond to dissipate before beginning negotiations with a new individual. Even if several had experience of previous bonds, it is seldom over 4 years before the new pair will have formed a liason and claimed one of the compounds. With luck, a second pair will form in another year or so, but of course the remaining two owls are relegated to the third compound, not by choice but by being the residue of the first two choices! This is not a popular position for anyone, owls included. They are removed from the complex and put into another mixed rotation elsewhere. This frees the remaining compound and it is reserved for the progeny of the two pairs.

At our latitude, August is departure time from parental territories for the young. It is interesting to note that the young from both pairs have found their way to the free territory by September, and that the parents never follow. The corridors are then closed and the assembled young must learn to fend for themselves on live prey tossed into natural cover. Defrosted rodents are provided (visibly) for the three coldest months, with live feeding resuming in early spring, when most young are spontaneous and successful hunters. It should be noted that this schedule applies only to northern species, which are shipped by air to parental sources in spring. Progeny of owls of our latitude are released in the September of their natal year, following 1 month on live prey. The offspring of species which engage in fast flight or long distance travel (Hawk Owls, Snowy, Great Horned) may be moved in spring to enclosures which offer sustained flight over 80 to 96 ft (24 to 29 m) to build up pectoral muscles in pre- paration for this challenge.

Hawk Owls are irregular in many ways, one of which is the inclination to form only seasonal bonds with each other, appearing not even to recognize, by October, the partner of last April! This inconstancy presents unique challenges in designing a cage labyrinth conducive to breeding. At our facility, 10 Hawk Owls can access seven enclosures and can fly a total circuit around 0.5 ac (0.2 ha) via the corridor system (figs. 1, 2, and 3). Females of this species appear to develop a fidelity to a nest site in a given territory, if not to a male. Wing-crippled females, finding corridors inaccessible will stay home and loudly solicit for a male, while flighted females use the corridors to go 'shopping' for males, cause all kinds of conflict with both males and females along the way, and invariably bring the selected male back 'home'! Apparently few males can resist a soliciting female!

Finally, the surprising, even astonishing, demonstrations of bonding between self-selected individuals can only be seen, year round and through their remaining life times, on a remotely controlled monitoring system. Thus up to 23 video cameras, rotated by season amongst 30 of our 52 enclosures, routinely relay images of private lives. Unlike the confrontation inevitable with human presence, the owls are unwitting of this surveillance.

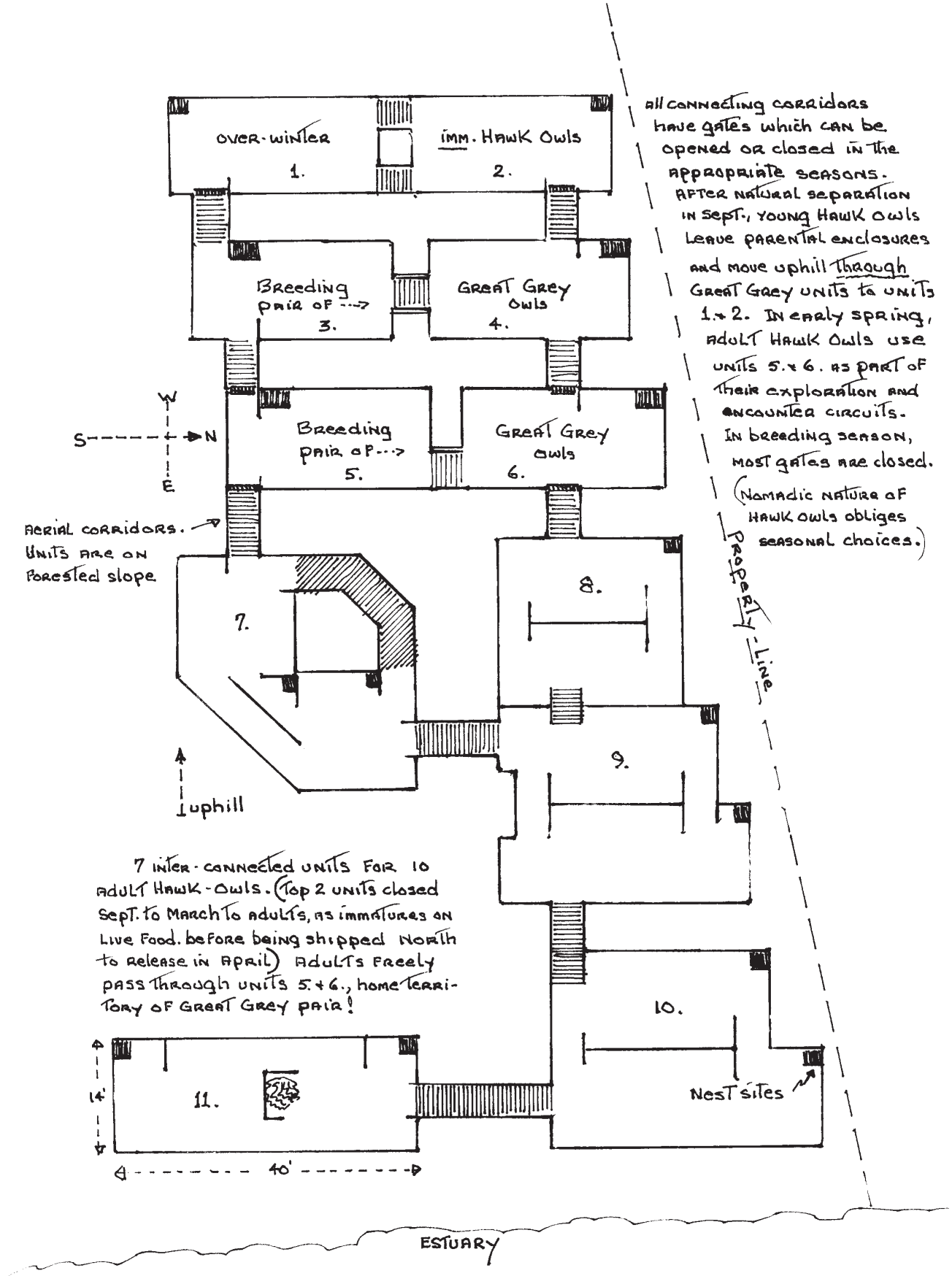

Figure 1.—*Diagram of 0.5 ac (0.2 ha) complex for five pairs of nomadic Hawk Owls (*Surnia ulula*) at the Owl Foundation in Ontario, Canada.*

Figure 2.—*Two of six flight corridors connecting 7-unit Hawk Owl (*Surnia ulula*) complex at the Owl Foundation in Ontario, Canada.*

Figure 3.—*Juvenile Hawk Owl (*Surnia ulula*) typically on vertical snag in parents' compound at the Owl Foundation in Ontario, Canada.*

Of course springtime is the season when one hovers hopefully around the monitors as the breeding behavior unfolds, watching for the first glimpse of irresistible fuzzies and admiring the total devotion of both parents (figs. 4, 5, and 6). Anticipation of these exciting moments is part of all our winters, even as we review the tapes of previous seasons.

But for the most memorable moments, there is nothing so touching, relayed through the camera's eye, as a pair of middle-aged Great Gray Owls, sitting close together in December sunlight (when egg follicles and gonads are at their lowest ebb) grooming each other quietly and solicitously, keeping the pair bond in good order. For the watcher who has kept the dream alive for so many years, trying and failing and trying again, these are the golden moments. Against all predictions, such permanently damaged wild owls have overcome their physical deficits, have left fear and stress behind, and are utterly absorbed in each other. Over the years it has been a privileged look at ancient relationships, still enduring, still strong, even after such calamitous lives.

Figure 4.—*Just fledged juvenile Flammulated (*Otus flammeolus*) Owl at the Owl Foundation in Ontario, Canada.*

Figure 5.—*Immature Snowy Owl (*Nyctea scandiaca*) on pool in parents' 1,200 ft² enclosure at the Owl Foundation in Ontario, Canada.*

Figure 6.—*Mother Great Gray (*Strix nebulosa*) (blind and deaf right side) with brood of 3 nestlings at the Owl Foundation in Ontario, Canada.*