**Eating not being eaten. A hummningbird’s strategy of foraging in the condition of high predation risk**

1. Review of predation on the bummingbird

2. Simulation

3. Empirical results

Test of predation risk allocation hypothesis!

Hummers are ideal because: energy limitation, tests should examine the behaviour of animals

held, ideally in the long term, under conditions where their ﬁtness

is clearly energy limited. Interestingly, only three of the 15 studies

RAH – the intensity of prey vigilance depends on level of risk and proportion of predator presence. Paradox of RAH – if predators are always present (and/or the motivation is high) the prey will eat anyway!!

Hummingbirds point of view! - Not having defined enemy may seem to be a great world, but being a potential prey of everybody makes the hell of earth!!!

Hummers are good because they have different cost of not eating and being predated, for most animals it is like to eat at given moment is not that critica, on the other had they have specified predators. So hummers are very much determined to forage, and not so much to afraid of? The latter was commonly assumed, but Limes evidence show they impose basic vigilance.

We examined in detail how the birds behaviour changes in face of real danger.

Costs and benefits of foraging are expressed in different units, and they are even more different for ifferent species.

t is unlikely that any organism, regardless

of taxon, is free from a foraging cost of predation. Porcupine’rino and hyena(Berger and Cunningham (1994) reported that dehorning of black

rhinoceroses in Namibia to discourage poaching led to attacks by hyenas on

mothers and their young. The speed of the hyenas’ response suggests that the

hyenas and rhinos had considerable behavioral experience with each other’s

tactics. A tension exists between rhinos and large carnivores even though the

carnivores almost never kill rhinos.)

**Discussion:**

The cost of predation does not necessarily have to correlate with actual

mortality caused by predators (Lank and Ydenberg 2003). The predation a

species experiences has already been ﬁltered through the lens of antipredator

behaviors. If cautious behavior pays big dividends in safety, then cautious

animals maypay a relatively high cost of predation in lost food gains even while

experiencing little actual mortality. Brown and Alkon (1990) saw this with

the Indian crested porcupine (*Hystrix indica*). Its spines bespeak antipredator

morphology, and indeed, the porcupine is virtually impervious to predation

by the leopards, wolves, hyenas, and jackals inhabiting its environment in

the Negev Desert. However, measures of its foraging behavior showed that

the porcupine paid a high predation cost of foraging when active on moonlit

nights or in habitats free from perennial shrub cover. How can we reconcile