Flagship Amami Jay
~ the utility of ecological study on the birds for the unique island biodiversity conservation ~

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Garrulus lidthi

- Distribution : ～700km^2; four islands of

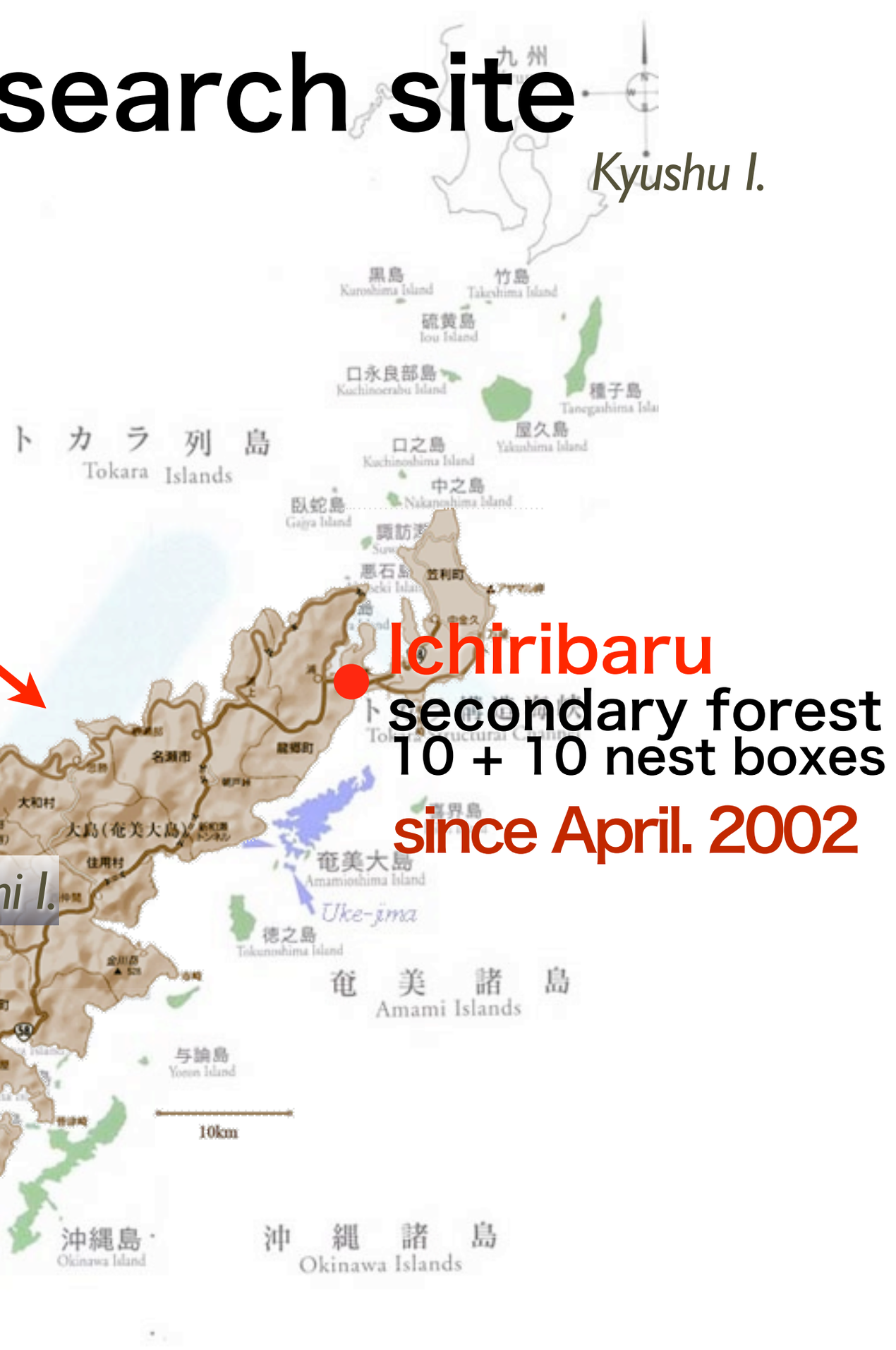
Amami-oshima, Kakeroma-jima, Uke-jima & Edateku-jima

- Habitat : any forest stands, all over the islands ; ～650km^2

- Population size and dynamics / density,

up to 1000 family flocks - territories,
fluctuates depending on acorn crops, predation pressure and typhoon damages,
0 ～ 8 birds / 2km x 50m line census
average 24 birds / km^2 (in March, at good habitats)

Research site



Why is it　the Amami Jay　to be monitored ?

_ advantages are,

- endemic to the small islands (～700km^2)
- common on the island
- beautiful / conspicuous
- "natural monument" of Japan
- once having been threatened
  , and also possible to be an endangered,
- possibly we can study "whole" species
- depending on the dominant acorns . . . etc.

Our present approach (1) >> MULTIPLE
around AJ

ecological surveys of

Amami Jay (nest boxes and censuses)
dominant acorn production dynamics
forest vegetation dynamics (LTER plot)
Amami Thrush
Amami Woodcock
Amami frogs
alien rat dynamics
alien mongoose management
.... *etc.*

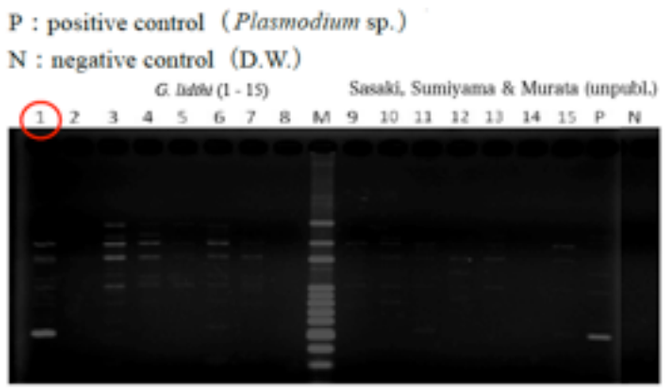
bird community

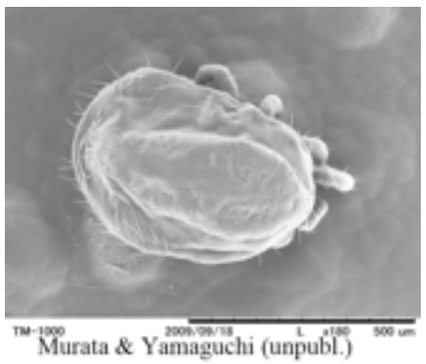
on Amami Island

Our present approach (2)

>> ALL about AJ

ecology
genetics
pathology
in & ex - situ conservation




Murata & Yamaguchi (unpubl.)

in the future (or hope) ….

genomics
ethology
endocrinology
physiology

sociology
jurisprudence

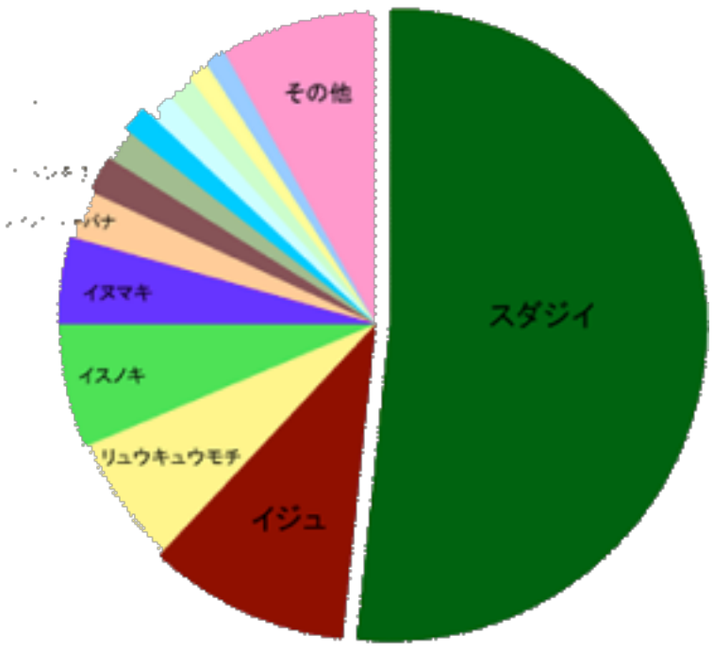
(in-situ, Sakai & Sato 2003 for ex-situ bird)

case of the
We like to make it a model species for conservation.

in-situ

in-situ

ex-situ

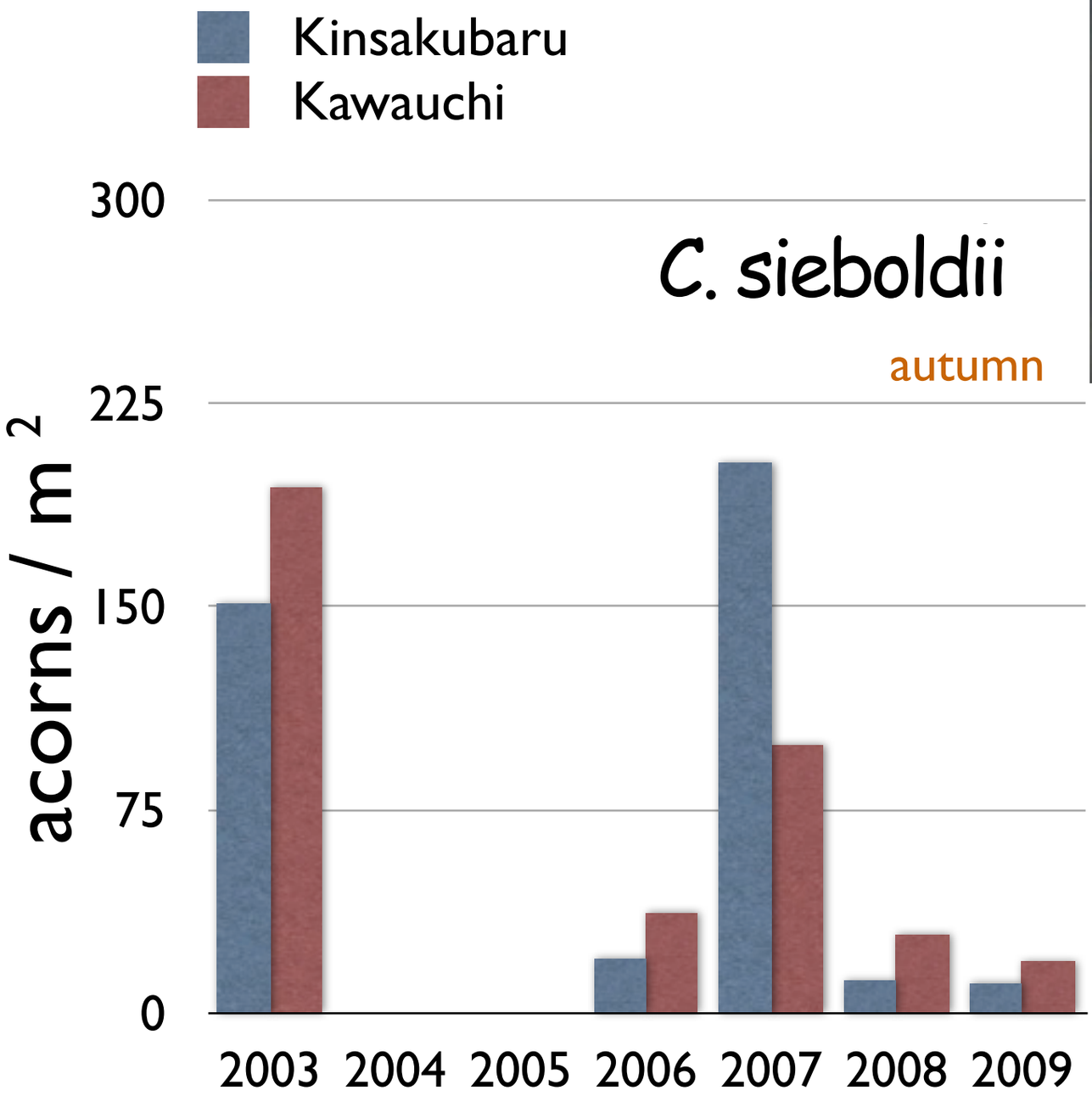


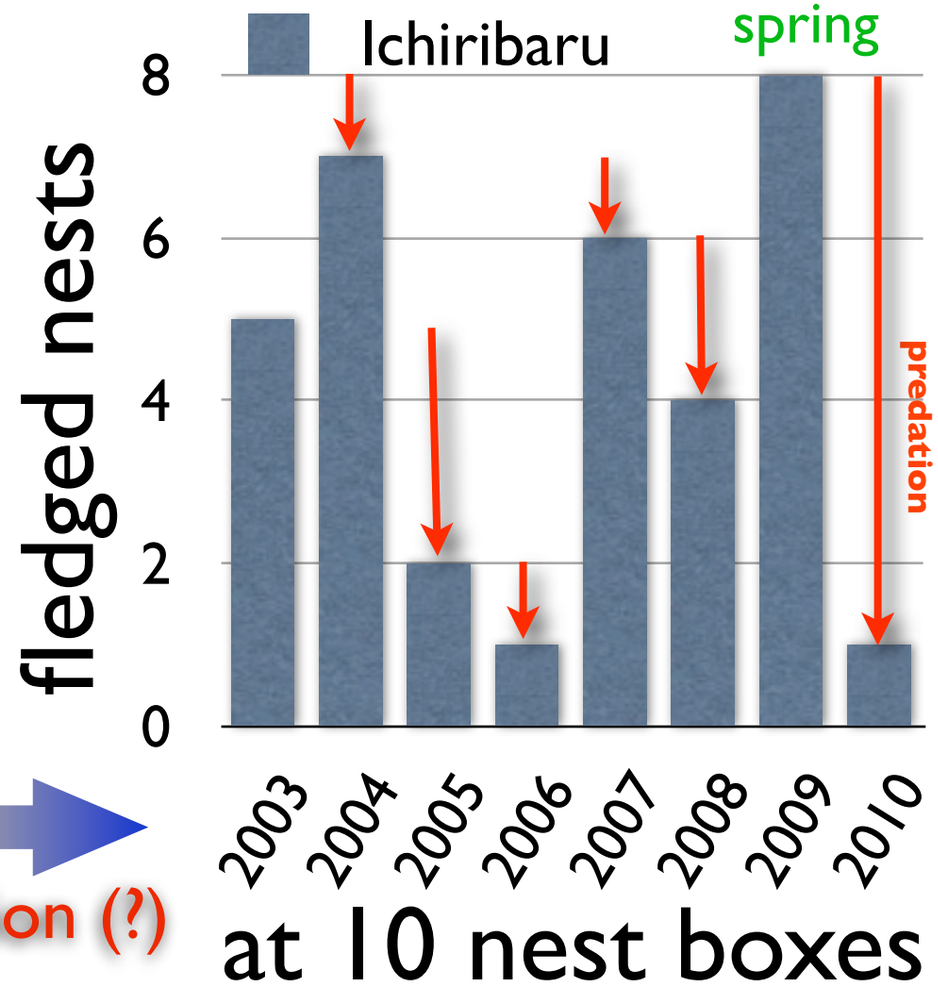
total basal = 58.4m^2,

C. sieboldii covered more than a half

Larger area on the mountain slopes is covered with Castanopsis sieboldii, which produce a large amount of small acorns in autumn.

population dynamics & acorn - jay interactions





acorn production + predation + competition (?)

Simberloff (1998) , Biological Conservation 83

rough sketch

"to monitor and manage biodiversity"

- indicator species ..... the best or a better one cannot be defined
- umbrella species ..... for other species, benefit is "by chance"
- flagship species ..... expensive, may sacrifice other species
- ecosystem management ..... may permit a species loss
- keystone species ..... expecting, but hard to define

, then all are problematic
, because none of them saves all (most) other species

for what ?
& why not the combination ?

Is Amami Jay . . .

an indicator species ? • • • • yes , of forest dynamics

umbrella species ? • • • • • doubtful
, maybe for the most smaller animals

keystone species ? • • • • • no , but maybe indicate the dominant tree crops

flagship species ? • • • • • can be as plain
please see the last sheet

& model species of ecosystem monitoring ?

• • • • • future possibility

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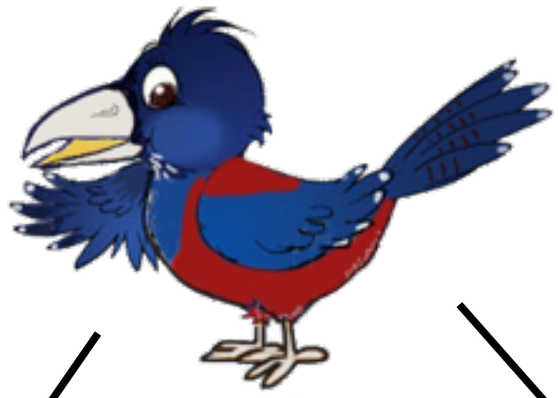
ecosystem management (Ecological Society of America, 1996)
"It is important to understand the dynamics in ecosystems."

AJ is high in the Amami forest food web.

And also depend on the acorns,
SO it can be a good indicator sp.
to monitor ecosystem dynamics.



snakes,
crows and
hawks

Insects

Acorns

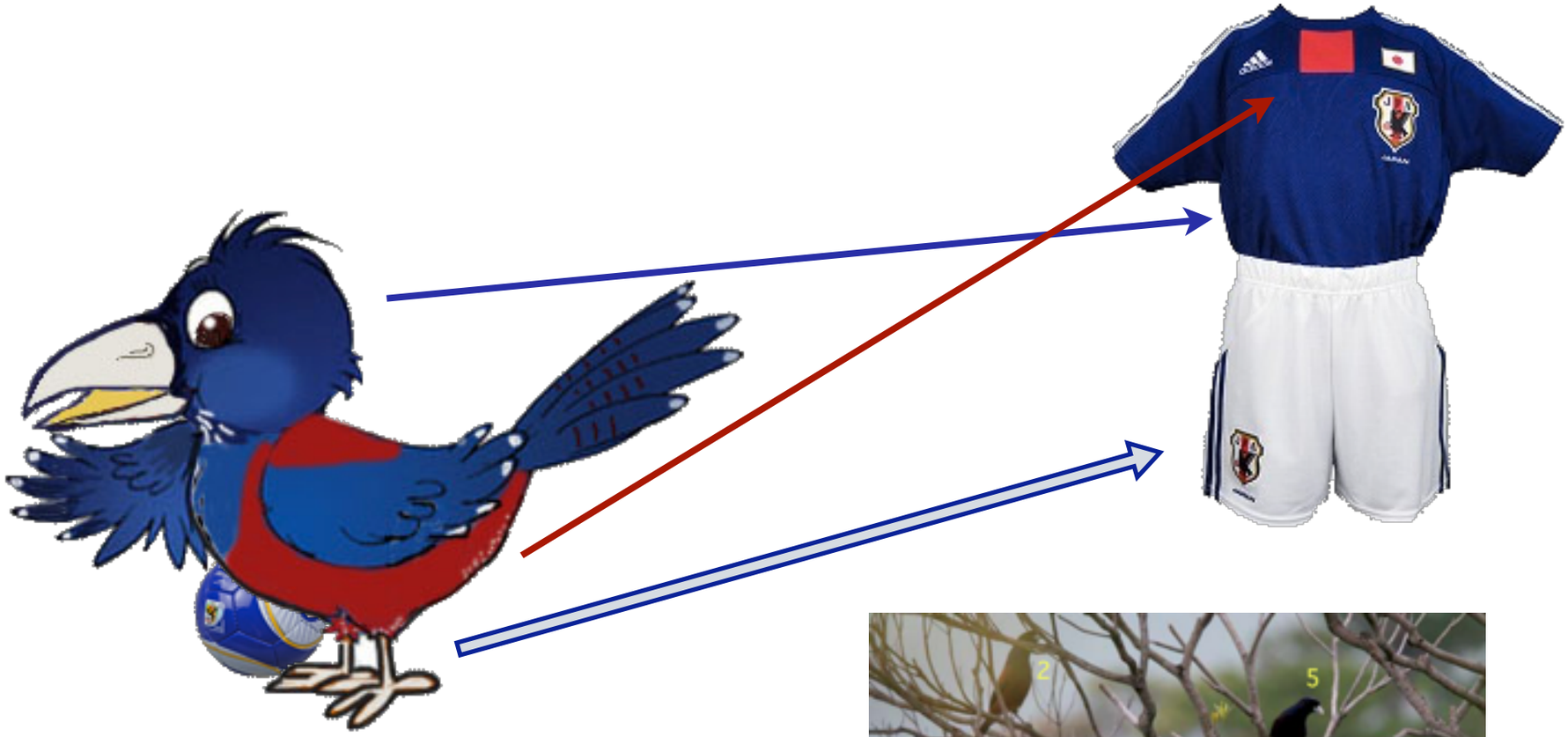
small birds,
rats and
reptiles

All annually fluctuate.

"Why Flagship ? "　・・・yes・・・

It's "SAMURAI Blue Jay"

They play "blues" in the forest ecosystem on Amami Island.



The Elven

They sometimes flock together.→

SAMURAI Blue Jay

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