

# Fruit-eating and Birds and Bird-dispersed

## s in the Tropics and Temperate Zone

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tats in part because the tropics  
contain more plant species. At least  
250 species of bird-dispersed  
plants occur within a 16 km<sup>2</sup> area in  
Costa Rica<sup>8</sup>; 90 bird-dispersed tree  
species co-occur with a  
low-diversity rainforest in New  
Guinea<sup>9,10</sup>. In contrast, mixed  
forests and mediterranean wood-

Tem

Natha

Tr

cal forests have been





scan specialize on fruits year-

10-

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different fruit colors among bird-  
response to fruit scarcities<sup>6,11,13,15</sup>  
a nes little be-  
tween sites, in spite of major geo-  
graphical differences in floras<sup>21</sup>.  
The frequency distribution of  
fruit size shows a right-hand skew in  
all habitats, although the tail of

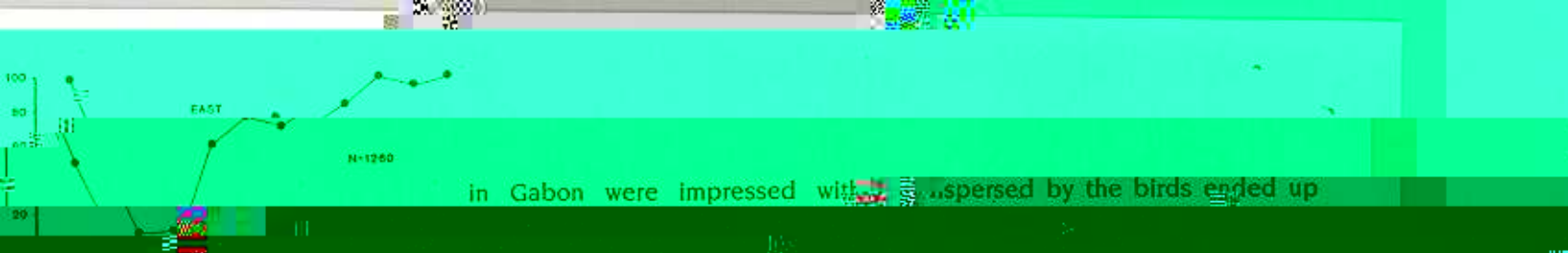
Traits of fruit-eating birds  
Tropical birds, like frugivores, span a  
greater size range than their  
temperate zone counterparts<sup>9,14</sup>.  
hawaiian fruit-eaters the size of guans

Fig. 1. Frequency distributions of fruit diameters from  
Spanish mediterranean scrub<sup>6</sup>, U.S. mixed forest<sup>11</sup>,  
Costa Rican lower montane wet forest<sup>13</sup>, and Niangua  
lower montane rainforest<sup>15</sup>. Tropical forests include  
considerably larger fruits than temperate forests, but  
are generally similar in fruit diameter. Most habitats have  
similar median fruit sizes.

the fall  
robins (*Turdus*  
simple, turn from

subset of large fruit-eating birds  
that disperse their seeds, has  
tended to favor the unusu-

the way they handle them, but no  
consistent morphological features  
*migratorius*), for e-



in Gabon were impressed with *Acacia* dispersed by the birds ended up

actions<sup>10</sup>. Forty or more bird species consume the small watery fruits of *Acnistus arborescens* in Costa

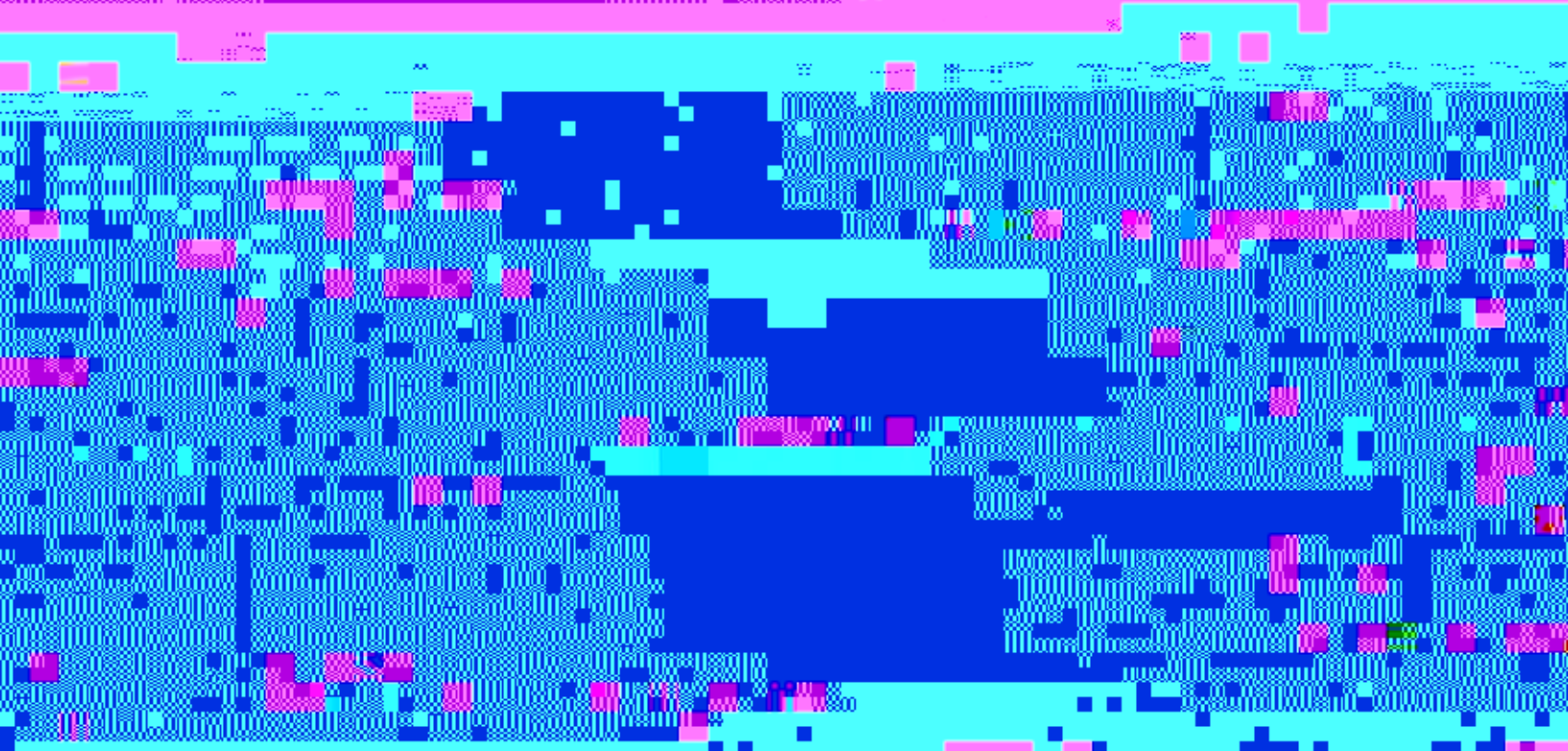
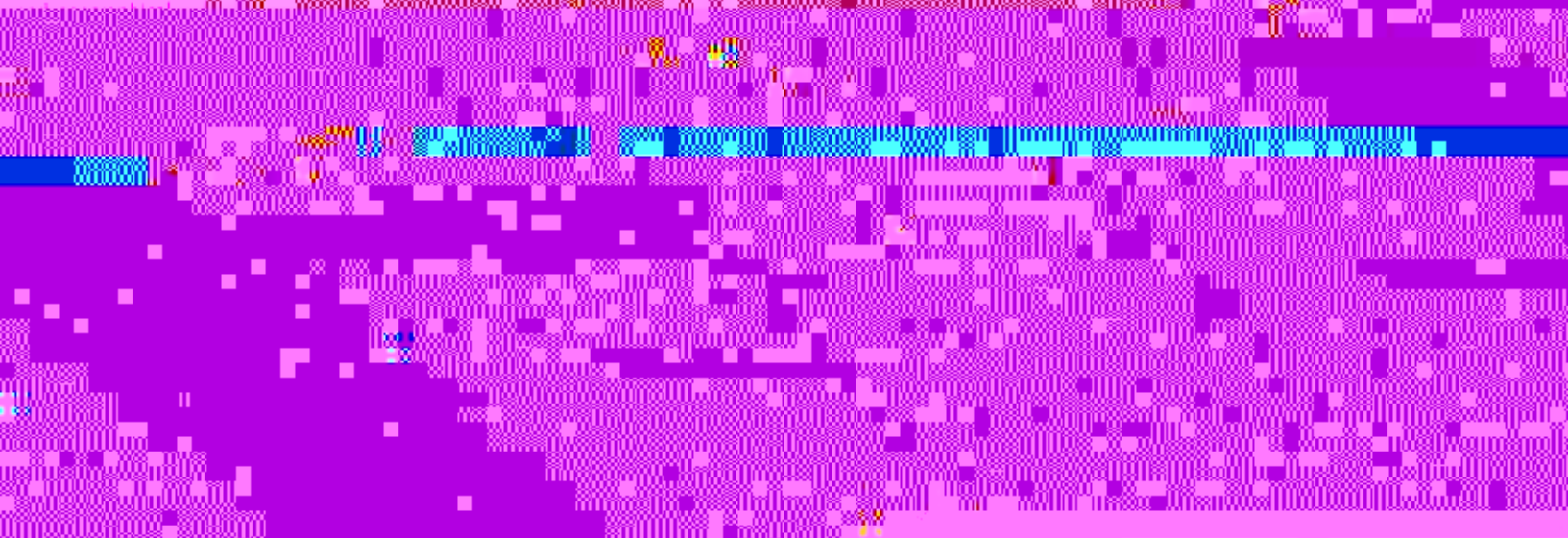


*Sylvia melanocephala*, for instance, is rarely found except where fruit-

tropical plants. Tanagers and finches, abundant and diverse fruit-

Fig. 2. The proportion of samples of American robins collected

fruit (by volume) in samples of American robins collected in neotropical forests, crush





such as external

the average fruit everywhere is and evolution

for the lack of finely tuned specificity of  
 conclude that there is a difference in environment is that coevolve  
 tatively as seed dispersers. Do these plants and the

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