

Interaksi Anjing Domestik (*Canis familiaris*) dengan Karnivora Kecil di Taman Nasional Bukit Barisan Selatan

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INTISARI

Anjing domestik (*Canis familiaris*) merupakan karnivora yang memiliki kepadatan populasi tinggi dan tersebar di berbagai wilayah. Keberadaan anjing domestik di kawasan hutan memunculkan interaksi dengan sesama ordo karnivora berukuran sama atau lebih kecil, yaitu karnivora kecil. Taman Nasional Bukit Barisan Selatan menjadi habitat bagi anjing domestik dan karnivora kecil. Penelitian ini bertujuan untuk mengetahui interaksi anjing domestik dengan karnivora kecil melalui tumpang tindih spasial dan temporal.

Penelitian memanfaatkan data sekunder survei *camera trap* tahun 2019 yang merupakan hasil kerjasama antara Balai Besar Taman Nasional Bukit Barisan Selatan dengan Wildlife Conservation Society–Indonesia Program. *Camera trap* dipasang pada 65 grid berukuran 3x3 km. Data yang digunakan meliputi titik perjumpaan dan waktu tertangkap anjing domestik dan karnivora kecil. Analisis tumpang tindih spasial menggunakan model *two-species co-occurrence* pada *software Presence*. Analisis tumpang tindih temporal menggunakan *package overlap* pada *software R-studio*.

Hasil penelitian menunjukkan adanya tumpang tindih spasial dan temporal anjing domestik dengan karnivora kecil pada intensitas yang berbeda-beda. Tumpang tindih spasial dan temporal pada interaksi anjing domestik dengan *Martes flavigula* ($\gamma = 2.075457$, $\Delta = 0.69246$) dan *Pardofelis marmorata* ($\gamma = 1.227178$, $\Delta = 0.7447$) mengindikasikan kompetisi eksploitatif untuk memperoleh sumber daya. *Artictis binturong* ($\gamma = 2.129185$, $\Delta = 0.47756$), *Mydaus javanensis* ($\gamma = 1.0177$, $\Delta = 0.24517$), *Paguma larvata* ($\gamma = 1.231806$, $\Delta = 0.23018$), dan *Prionodon linsang* ($\gamma = 2.074048$, $\Delta = 0.17423$) bertumpang tindih spasial dengan anjing domestik namun tumpang tindih temporalnya rendah karena pola waktu aktif nokturnal. Tumpang tindih temporal *Catopumma temminckii* dengan anjing domestik ($\gamma = 0.984075$, $\Delta = 0.672307$) tinggi, direspon dengan penghindaran spasial oleh karnivora kecil tersebut. Kompetisi antara anjing domestik dengan *Prionailurus bengalensis* ($\gamma = 0.628005$, $\Delta = 0.28061$) rendah karena adanya penghindaran spasial dan perbedaan pola waktu aktif. *Arctonyx hoevenii* ($\Delta = 0.315445$) dan *Hemigalus derbyanus* ($\gamma = 0.631209$, $\Delta = 0.14295$) terdistribusi independen tanpa pengaruh dari anjing domestik.

Kata kunci: tumpang tindih, *camera trap*, spasial, temporal

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Interaction of Domestic Dog (*Canis familiaris*) and Small Carnivore in Bukit Barisan Selatan National Park

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ABSTRACT

Domestic dogs (*Canis familiaris*) are the most abundant and widely distributed Carnivora. The presence of domestic dogs in protected areas led to interactions with order Carnivora of the same or smaller body size, especially small carnivores. Bukit Barisan Selatan National Park is a habitat for domestic dogs and small carnivores, due to its tropical forest and directly adjacent to anthropogenic uses. This research aimed to find out the interaction of domestic dogs with small carnivores through spatial and temporal overlap.

The research utilized secondary data from the 2019 camera trap survey from collaboration between Bukit Barisan Selatan National Park Center and Wildlife Conservation Society-Indonesia Program. The study area was divided into 65 of 3x3 km grid cells. The data used were presences and time captured by domestic dogs and small carnivores. Spatial overlap analyzed using two-species co-occurrence model of Presence software. Temporal overlap analyzed using package overlap of R-studio software.

The results have shown that spatial and temporal overlap of domestic dogs with small carnivores happened in different intensities. Both of spatial and temporal overlap in interactions of domestic dog with yellow-throated marten ($\gamma = 2.075457$, $\Delta = 0.69246$) and marbled cat ($\gamma = 1.227178$, $\Delta = 0.7447$) indicated an exploitative competition for resources. Binturong ($\gamma = 2.129185$, $\Delta = 0.47756$), sunda stink badger ($\gamma = 1.0177$, $\Delta = 0.24517$), masked palm civet ($\gamma = 1.0177$, $\Delta = 0.24517$), and banded linsang ($\gamma = 2.074048$, $\Delta = 0.17423$) had spatial overlap with domestic dogs but low temporal overlap due to their nocturnal active time patterns. High temporal overlap of asiatic golden cat with domestic dog ($\gamma = 0.984075$, $\Delta = 0.672307$) was responded by spatial avoidance to domestic dog. Spatial avoidance and low temporal overlap may have reduced competition between domestic dog and leopard cat ($\gamma = 0.628005$, $\Delta = 0.28061$). Sumatran hog badger ($\Delta = 0.315445$) and banded civet ($\gamma = 0.631209$, $\Delta = 0.14295$) were distributed independently without any influence from domestic dogs.

Keywords: overlap, camera trap, spatial, temporal

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