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Acoustic scattering from zooplankton and micronekton in relation to a whale feeding site near Georges Bank and Cape Cod

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Antwast This research was nort of the Power Channel Assan Bradwativity Dynamimant (SOA

PEX), a multidisciplinary study to investigate the biological and physical processes associated with the very bish annual springtime abundance of right wholes (Fundance algorithm) in the Great South

small region in the northern part of the GSC. Virtually the entire known northwest Atlantic population of the right whale (Eubalaena glacialis), an endangered species, may be found within the GSC at this time (KENNEY et al., 1995). We hypothesized that this privention of right wholes in the CSC during spring warding to an unit ~**1**___

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Fig. 10 — Distribution of concords and taxoed whale track-showing the relation of a taxoed right			
$E_{0,1}^{i}$ Distribution of conceases and tanged whale track-showing the relation of a tanged right			
	<u> </u>	$E_{0,1}(0)$ = Distribution of conenade and tanged whale track-showing the relation of a tanged right	











D.F. = degrees of freedom.

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	Table 9. Discriminant function analysis of biomass p develop the discriminant function and then testing it or	narameters using data classified as whale or non-whale to additional observations. The variables used were CPK,	
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•	SEGC were excluded because the	ey had no matching copepod data	
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device. For example, net estimates of biomass are derived from large volumes of water, but acoustic estimates are from a smaller volume (200 m^3 or more for nets and $60\text{--}100 \text{ m}^3$ for acoustic samples).

The estimated range of error associated with target strength is about ± 3 dB (between models and measured values for the same size target). This is equivalent to a product/ quotient factor of 2 (or 1/2) times the acoustically estimated biomass. Our experience with a large variety of horizontal and vertical net haul replicates indicates that a product/ quotient factor of 1 to several times net catch biomasses is commonly encountered

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in distribution of copepods observed in the frontal region of this small scale study may represent examples of both dispersing and concentrating factors dominating to different degrees.

Evidence for right whales modifying their behavior in response to changes in scale factors of copepod patches was examined by spectral analysis of the hydroacoustic data

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