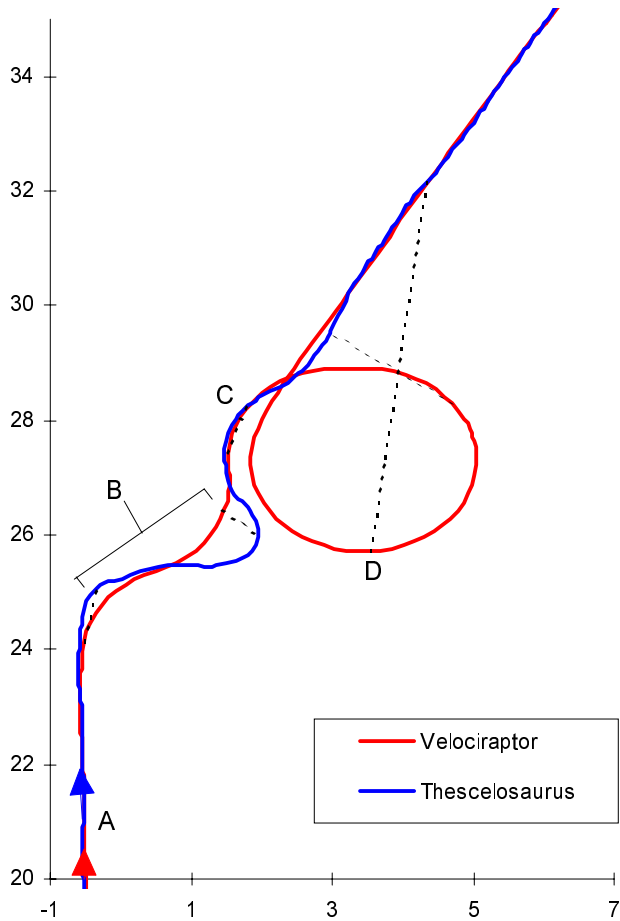


Color Plate 1a: Encounter Strategy A, Close up

This encounter strategy allows the agile thescelosaurus to escape virtually every time if the velociraptor's grabbing radius is below a critical value (0.45 m). Unfortunately, the strategy fails with equal certainty if the velociraptor's grabbing radius is above that critical value. The velociraptor in this figure has a grabbing radius of 0.4 meters.

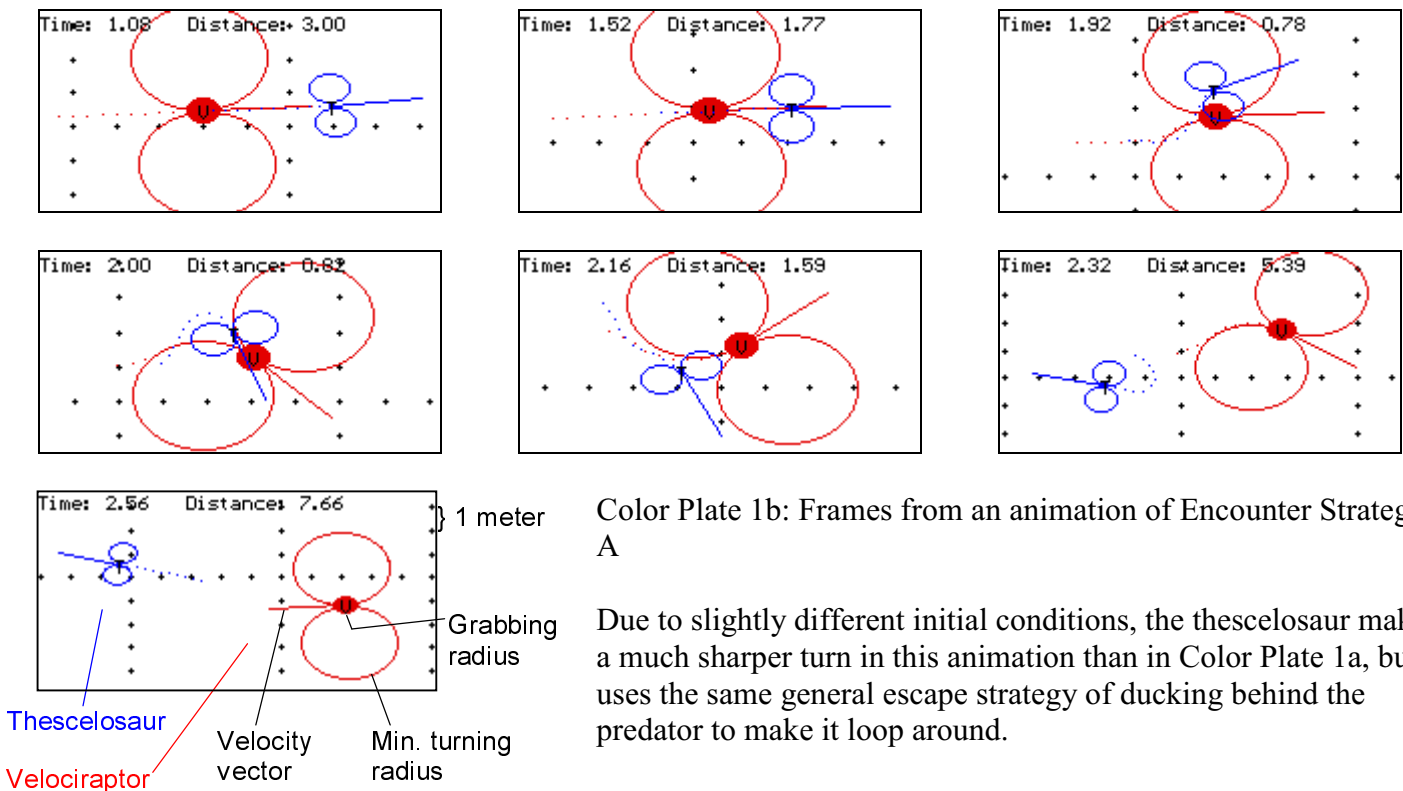
A few key stages of the strategy are described below:

- A. The thescelosaurus runs away from the velociraptor.
- B. When the velociraptor gets too close, the thescelosaurus quickly turns out of the way.
- C. The velociraptor cannot respond to this sudden turn fast enough, letting the thescelosaur duck behind it. Now, the velociraptor must loop around to continue chasing its meal.
- D. The thescelosaur escapes before the velociraptor completes its loop.



X & Y axes are in meters

Dotted lines connect points on the two curves that correspond to the same time



Color Plate 1b: Frames from an animation of Encounter Strategy A

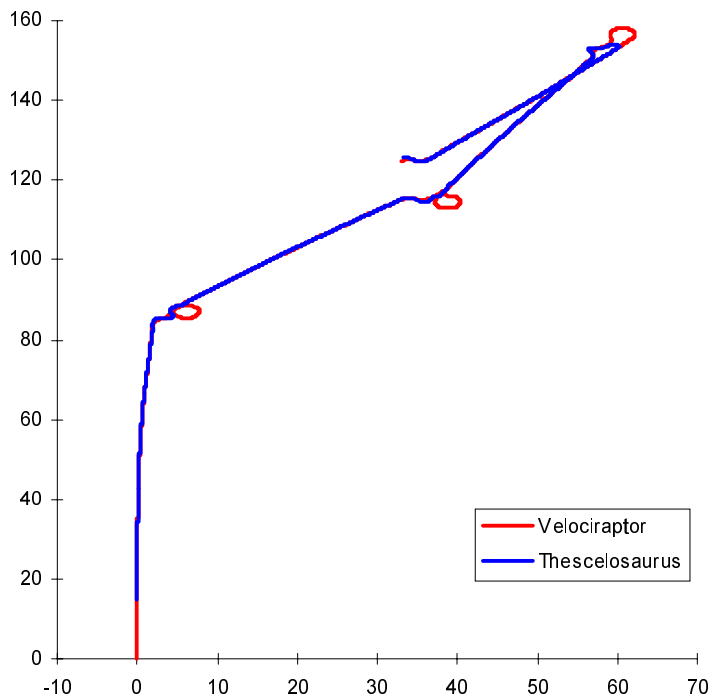
Due to slightly different initial conditions, the thescelosaur makes a much sharper turn in this animation than in Color Plate 1a, but uses the same general escape strategy of ducking behind the predator to make it loop around.

Color Plate 2: Encounter Strategy A, Far away

After a round of Encounter Strategy A, the velociraptor soon catches up with the thescelosaurus, creating a new encounter every 3.2 seconds.

This figure shows a typical series of encounters for a 15 second chase when the thescelosaurus detects the velociraptor at the minimum detection radius (15 m). Notice that the angle between the chase and escape paths is highly variable and sensitive to initial conditions.

After 15 seconds, the velociraptor gets tired and the thescelosaurus can simply run away.



X & Y axes are in meters

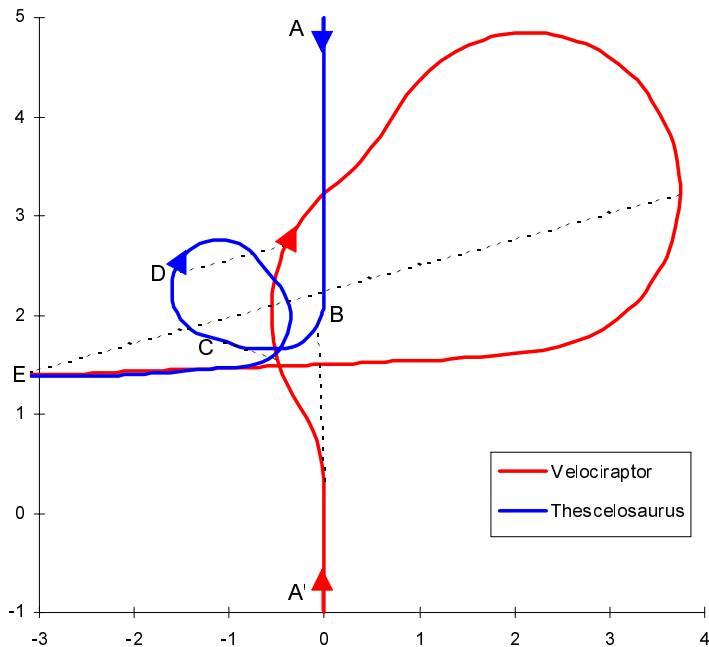
Dotted lines connect points on the two curves that correspond to the same time

Color Plate 3: Encounter Strategy B

The thescelosaurus must follow Encounter Strategy B if the velociraptor has a grabbing radius above 0.45 meters (at which Encounter Strategy A no longer works). The velociraptor in this figure has a grabbing radius of 0.6 meters.

A few key stages of this strategy are described below:

- A. The thescelosaurus runs towards the velociraptor
- B. When the velociraptor is too close, the thescelosaurus dodges off to a side and the velociraptor follows.
- C. The thescelosaurus is now to the velociraptor's left, but the velociraptor curves to the right because it knows it cannot make a sharp enough turn to catch its meal.
- D. The thescelosaurus has sent the velociraptor on a huge loop while it swiftly makes a much tighter turn to come in behind the velociraptor.
- E. The thescelosaurus is far away even before the velociraptor completes its loop.



X & Y axes are in meters

Dotted lines connect points on the two curves that correspond to the same time

Soon after this, the thescelosaurus must turn around and run towards the velociraptor again.