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Finned Swordfish

From sudokuwiki.com, the puzzle solver's site

2		
	3	6
5		7

This is a particularly extreme sudoku puzzle but the Finned Swordfish is nicely arranged. As discussed in the article on [SwordFish](#) it is not necessary for every cell in the 3 by 3 formation to contain the candidate, in this example candidate 3. This SwordFish is a 2-2-3 version since we have 3 twice in the first column, twice in the second column and three times in the third column. It is orientated on the columns since they are the units where candidate 3 occurs at least three times but no more. We are eliminating in the rows.

Now, that said it is not a perfect Swordfish because the center column 5 contains an extra 3 in J5, which ruins the whole formation. However, the Finned Rule says we can ignore it if we confine the eliminations to the box where the fin is, namely box 8. There is one 3 that we can remove, on G4.

	1	2	3	4	5	6	7	8	9
A	6	3 7 9	5	4	1	8	3 7 9	3 7	2
B	8	3 4 9	3 4 9	3 5 6 9	7	2	3 4 5 9	3 4 5 6	1
C	2	1	3 4 7 9	3 5 6 9	3 5 9	6 9	3 4 5 7	8	3 7 6
D	9	3 7	8	2	6	5	1 3 7	1 3 7	4
E	3 4	5	3 4 6 7	1	8	4 9	2	3 6 7 9	3 6
F	1	2 4 6	2 4 6	7	4 9	3	8	6 9	5
G	3 4	8	1 6 9	3 5 6 9	3 5 9	4 6 7 9	1 3 4 5 7	2	3 7
H	5	6 9	1 6 9	3 6 9	2	4 6 7 9	1 3 4 7	1 3 4 7	8
J	7	2 3 4	2 3 4	8	3 4 5	1	6	3 4 5	9

Finned SwordFish Example 1: [Load Example](#) or : [From the Start](#)

Two examples now of the Sashimi variety of Finned SwordFishes.

Figure two is a little more bunched up but we have a 2-2-3 formation based on eliminations in rows. The exceptional candidate 3 which blocks this from being a perfect SwordFish is on G2. But we can invoke the Sashimi observation to ignore the lack of a 3 on H2, one of the corners of the SwordFish. Eliminating in row H and box 7 we can remove the 3 from H1.

	1	2	3	4	5	6	7	8	9
A	2	4 ³ ₉	4 ³ _{8 9}	1 ³ _{5 9}	1 ³ _{5 8}	1 ³ _{8 9}	6	1 ₉	7
B	1 _{8 9}	7		6	1 ² ₈	4	1 ² _{5 9}	3	1 ² _{5 9}
C	1 ³ ₉	6	5	1 ^{2 3} ₉	7	1 ^{2 3} ₉	8	4	1 ² ₉
D	5	8	2	1 ³ ₉	6	1 ³ ₉	1 ³ ₉	7	4
E	4	3 ₉	7	8	1 ^{2 3}	5	1 ^{2 3} ₉	1 ² ₉	6
F	3 ₉	1	6	2 ³ _{7 9}	4	2 ³ _{7 9}	2 ³ ₉	5	8
G	3 _{7 8}	5 ³	1	2 ³ _{7 5}	9	2 ³ _{7 8}	4	6	2 ₅
H	3 _{7 9}	2	3 ₉	4	1 ³ ₅	6	1 _{7 9}	8	1 _{5 9}
J	6	4 ⁵ ₉	4 _{8 9}	1 ² _{5 7}	1 ² _{5 8}	1 ² _{7 8}	1 ² _{5 7 9}	1 ² ₉	3

Finned Sashimi Example 1: [Load Example](#) or : [From the Start](#)

The second example illustrates that the Sashimi cell doesn't have to be a clue or a solved cell. The brown cell A6 simply lacks the candidate 7, which had been removed using previous logical strategies. The double fin is in green, A4 and A5. This is quite a restricted SwordFish, which in row orientation is a 1-2-2 formation - but it works!

	1	2	3	4	5	6	7	8	9
A	4	2	3 ₆	1 ⁷	6 ^{7 8}	1 ₈	1 ³ _{7 6}	9	5
B	3 _{5 8 9}	5 ₇	3 _{5 6 9}	1 ² _{5 7}	4	1 _{5 7}	1 ^{2 3} _{7 6}	2 _{7 6}	2 ³ _{7 8}
C	5 ₈	5 ₇	1	9	2 ^{5 6} ₇	3	4	2 _{7 6}	2 _{7 8}
D	5 ³ ₇	6	5 ³	8	9	2	5 ₇	1	4
E	5 ₇	4	2	3	1	5 ₇	9	8	6
F	1	9	8	4	5 ₇	6	2 _{7 5}	3	2 ₇
G	2 ³ _{5 9}	1	7	6	2 ³ ₅	4	8	2 ₅	2 ³ ₉
H	2 ³ _{5 9}	5 ³	4	1 ² _{7 5}	2 ³ _{7 8}	1 _{5 8 9}	2 _{7 6}	2 ^{5 6} _{7 9}	2 ³ _{7 9}
J	6	8	3 _{5 9}	2 ₇	2 ³ _{7 5}	5 _{7 9}	2 ³ ₇	4	1

Finned Sashimi Example 2: [Load Example](#) or : [From the Start](#)

2		
8		6
		3

	3	6
5		7

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