Supplementary Materials

Supplementary Table S1. Judgement documents involving illegal pangolin trade.

Documents summary statistic	No.
Documents involving smuggling	82
Documents involving cross-prefectural trade	153
Documents only involving one prefecture	272
Documents from multiple trials for one prosecution	62

Information based on judgement documents published on China Judgements Online from

January 1, 2014 to December 31, 2019.

Supplementary Table S2. Characteristics of pangolin trade network.

Statistic	
Size (total number of countries involved)	15
Size (total number of prefectures involved)	84
Mean number of shipments	2.4
Median (range) of sent shipments	2 (0 –37)
Median (range) of received shipments	1 (0 –27)
Mean number of connections	1.4
Median (range) of sent connections	1 (0 –11)
Median (range) of received connections	1 (0 –13)

Information based on judgement documents published on China Judgements Online from

January 1, 2014 to December 31, 2019.

Supplementary Table S3. International and China-Provincial statistics for nodes in the pangolin trade network (n = 98)

Country/ prefecture	Exported shipments	Imported shipments	Flow betweenness*	Exporting connections	Importing connections
Ethiopia	6	3	25	3	1
Pakistan	3	0	0	3	0
Equatorial Guinea	5	0	0	3	0
South Korea	1	1	2	1	1
Guinea	2	0	0	2	0
Cambodia	1	0	0	1	0
Qatar	1	1	1	1	1
Laos	5	0	0	3	0
Myanmar	31	0	0	5	0
Nepal	1	0	0	1	0
Nigeria	8	0	0	5	0
Italy	1	0	0	1	0
Indonesia	4	0	0	4	0
Vietnam	14	0	0	7	0
China					
Special administrative region					
Hong Kong	11	2	37	3	2
Province-level municipalities					
Beijing	1	9	15	1	8
Shanghai	2	10	21	2	7
Tianjin	1	0	0	1	0
Chongqing	0	2	0	0	2
Anhui province					
Bozhou	1	4	39	1	3
Xuancheng	0	1	0	0	1

Fujian province

Fuzhou	3	1	24	2	1
Longyan	0	1	0	0	1
Nanping	2	0	0	1	0
Ningde	0	2	0	0	1
Putian	1	2	4	1	2
Quanzhou	1	0	0	1	0
Sanming	0	1	0	0	1
Xiamen	0	1	0	0	1
Zhangzhou	1	0	0	1	0

Guangdong province

Foshan	1	6	198	1	5
Guangzhou	10	23	569	7	13
Heyuan	2	1	101	2	1
Jiangmen	2	1	52	2	1
Jieyang	2	3	45	2	3
Maoming	1	0	6	1	0
Qingyuan	4	1	0	2	1
Shanwei	2	0	167	2	0
Shenzhen	2	17	0	2	6
Yangjiang	0	1	0	0	1
Yunfu	0	3	0	0	3
Zhanjiang	0	1	0	0	1
Zhongshan	0	1	0	0	1
Zhuhai	1	3	39	1	2

Guangxi autonomous region

Baise	0	3	0	0	2
Beihai	5	1	23	3	1
Fangchenggang	20	8	145	11	3
Guilin	0	1	0	0	1

Nanning	5	1	10	4	1
Qinzhou	5	5	249	5	2
Yulin	0	3	0	0	3
Hainan province					
Haikou	0	2	0	0	2
Sanya	0	1	0	0	1
Hebei province					
Baoding	0	1	0	0	1
Shijiazhuang	1	1	48	1	1
Hunan province					
Chenzhou	1	1	0	1	1
Hengyang	0	3	0	0	1
Shaoyang	1	1	0	1	1
Yiyang	1	0	0	1	0
Changsha	0	2	0	0	1
Changde	1	0	0	1	0
Jilin province					
Jilin	0	1	0	0	1
Jiangsu province					
Nanjing	1	2	21	1	2
Suzhou	1	0	0	1	0
Taizhou	0	1	0	0	1
Wuxi	0	1	0	0	1
Jiangxi province					
Ganzhou	0	1	0	0	1
Ji'an	1	0	0	1	0
Jingdezhen	1	0	0	1	0
Jiujiang	2	1	1	1	1
Nanchang	1	2	45	1	2
Shangrao	1	0	0	1	0

Yichun	2	0	0	1	0
Yingtan	0	1	0	0	1
Shandong province					
Ji'nan	0	1	0	0	1
Shanxi province					
Jinzhong	0	1	0	0	1
Shaanxi province					
Xi'an	0	1	0	0	1
Sichuan province					
Chengdu	1	1	3	1	1
Nanchong	1	0	0	1	0
Panzhihua	0	1	0	0	1
Yibin	0	1	0	0	1
Tibet autonomous region					
Xigaze	0	1	0	0	1
Yunnan province					
Baoshan	1	27	3	1	2
Chuxiong	1	0	0	1	0
Dali	3	10	32	3	2
Dehong	28	11	76	5	2
Honghe	1	1	23	1	1
Kunming	5	7	138	3	4
Lijiang	0	1	0	0	1
Lincang	0	1	0	0	1
Pu'er	0	6	0	0	3
Qujing	0	5	0	0	2
Wenshan	1	1	1	1	1
Xishuangbanna	5	8	11	2	2
Zhejiang province					
Hangzhou	0	1	0	0	1

Lishui	1	1	37	1	1
Quzhou	1	0	0	1	0
Wenzhou	3	3	352	3	3

Information based on judgement documents published on China Judgements Online from January 1, 2014 to December 31, 2019.

*Flow betweenness is a measure of the extent to which the overall trade flow must pass through a particular node

Supplementary Table S4. Bootstrap results ranking the connectivity of key-player country/ prefecture nodes in the pangolin trade network

Key player nodes	Frequency chosen as key player
Shipments involving whole individuals and scales	
Guangzhou	100.00%
Beijing	87.50%
Fangchenggang	75.00%
Shenzhen	62.50%
Dali	50.00%
Shanghai	37.50%
Shipments involving only whole individuals	
Guangzhou	100.00%
Beijing	83.33%
Fangchenggang	66.67%
Myanmar	50.00%
Shaoyang	33.33%
Nanchang	16.67%
Shipments involving only scales	
Vietnam	100.00%
Pu'er	50.00%
Shanghai	43.33%
Nigeria	40.00%
Bozhou	33.33%
Shenzhen	33.33%

Supplementary Table S5. Key nodes highly connected to the other nodes in pangolin trade network

Group size	Key players						Reciprocal distance reach index*
Shipments involving whole individuals and scales							
1	Guangzhou						39.0%
2	Guangzhou	Beijing					46.4%
3	Guangzhou	Beijing	Fangchenggang				51.3%
4	Guangzhou	Beijing	Fangchenggang	Shenzhen			55.2%
5	Guangzhou	Beijing	Fangchenggang	Shenzhen	Dali		58.7%
6	Guangzhou	Beijing	Fangchenggang	Shenzhen	Dali	Shanghai	61.3%
Shipments involving only whole individuals							
1	Guangzhou						36.0%
2	Guangzhou	Beijing					46.7%
3	Guangzhou	Beijing	Fangchenggang				54.3%
4	Guangzhou	Beijing	Fangchenggang	Myanmar			57.2%
5	Guangzhou	Beijing	Fangchenggang	Myanmar	Shaoyang		60.1%
6	Guangzhou	Beijing	Fangchenggang	Myanmar	Shaoyang	Nanchang	63.0%
Shipments involving only scales							
1	Vietnam						21.8%
2	Vietnam	Shanghai					36.8%
3	Vietnam	Nigeria	Pakistan				45.9%
4	Vietnam	Shanghai	Pakistan	Pu'er			52.8%
5	Vietnam	Shanghai	Bozhou	Pu'er	Shenzhen		58.3%
6	Vietnam	Beijing	Bozhou	Pu'er	Shenzhen	Nigeria	62.6%

Information based on judgement documents published on China Judgements Online from January 1, 2014 to December 31, 2019.

*The reciprocal distance index represents the weighted distance, in terms of connections, of the non-key countries/ prefectures to the key ones

Supplementary Table S6. Key sets of nodes for best fragmenting the illegal pangolin trade network

Group size	Key players						Fragmentation index*
Shipments involving whole individuals and scales							
1	Kunming						0.471
2	Vietnam	Guangzhou					0.613
3	Vietnam	Guangzhou	Beijing				0.672
4	Vietnam	Guangzhou	Shenzhen	Fangchenggang			0.820
5	Vietnam	Guangzhou	Shenzhen	Fangchenggang	Qinzhou		0.896
6	Vietnam	Guangzhou	Shenzhen	Fangchenggang	Qinzhou	Beijing	0.928
Shipments involving only whole individuals							
1	Kunming						0.621
2	Guangzhou	Fangchenggang					0.870
3	Guangzhou	Fangchenggang	Wenzhou				0.897
4	Guangzhou	Fangchenggang	Shenzhen	Qinzhou			0.918
5	Guangzhou	Fangchenggang	Shenzhen	Qinzhou	Dehong		0.931
6	Guangzhou	Fangchenggang	Shenzhen	Qinzhou	Dehong	Beijing	0.959
Shipments involving only scales							
1	Vietnam						0.772
2	Vietnam	Shenzhen					0.874
3	Vietnam	Shenzhen	Kunming				0.895
4	Vietnam	Shenzhen	Kunming	Hong Kong			0.945
5	Vietnam	Shenzhen	Kunming	Hong Kong	Xishuangbanna		0.932
6	Vietnam	Shenzhen	Kunming	Hong Kong	Xishuangbanna	Dali	0.944

Information based on judgement documents published on China Judgements Online from January 1, 2014 to December 31, 2019.

*The fragmentation measure represents the proportion of the network that would be isolated based on the removal of the key players.

Supplementary Table S7. Bootstrap results showing the potential effect of removing a key-player country/ prefecture node on network fragmentation

Key players	Frequency chosen as key player
Shipments involving whole individuals and scales	
Vietnam	87.50%
Guangzhou	87.50%
Shenzhen	62.50%
Fangchenggang	62.50%
Qinzhou	50.00%
Beijing	50.00%
Shipments involving only whole individuals	
Guangzhou	100.00%
Shenzhen	83.33%
Fangchenggang	66.67%
Qinzhou	50.00%
Dehong	33.33%
Beijing	16.67%
Shipments involving only scales	
Vietnam	100.00%
Shenzhen	83.33%
Kunming	66.67%
Hong Kong	50.00%
Xishuangbanna	33.33%
Dali	16.67%