Rare Rafflesia kerrii is described for the first time from blooming male and female flowers. Females can be distinguished from males by the presence of an obliquely set band along the lower rim of the disk. R. kerrii’s distribution is extended farther south and north than hitherto reported, to Perak (W. Malaysia) and Prachuab Khirikhan (S. Thailand) where 12 colonies with 60 buds were found in an area ca. 2 km² at 500-850 m a.s.l. The habitat was unusually rich in Tetrastigma (Vitaceae) lianas though only T. quadrangulum Craib et Gagnep. Is confirmed as host among 10 spp. present. A strong smell of carrion is emitted from rafflesia’s perigone lobes, while a weaker fruity fragrance—unknown in other rafflesias—is produced in the tube’s cavity, the scents being kept separate by the diaphragm. Carrion flies Chrysomya villeneuvi Patton, C. rufifacies (Macquart), Lucilia porphyrian (Walker) and Hypopygiopsis tumrasvini Kurahashi (Calliphoridae) are attracted by the stench and the ‘festering sore’ appearance (lurid colour, crater shape, white blotches and/or whitish mold on processes) of the flower. The functions of the fragrance (e.g. to advertise carbohydrates, essential to adult flies) is discussed together with the physiology of the flies. Surplus pollen mush which has dropped from the anthers and a slimy secretion coating the parts below the disk can be sucked by the flies. They climb channels leading to the anthers, which are positioned in such a way that pollen cannot be stolen but only smeared onto the back of the flies’ thorax. In the female flower the process is similar, the pollen clot being rubbed off onto the stigmatic surface set between the oblique band and the column. It is proposed that R. kerrii is not a deceptive flower and that the flies might act as long distance pollinators between rafflesias flowering up to several weeks apart. The relatively modest size of infected hosts indicates that rafflesias may be able to survive parent host death and spread their population by vegetative infection of the host’s lateral runners.